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Bogged down in Ulster

The Government's proposal to amalgamate the New University of Ulster at Coleraine and the Ulster Polytechnic has run into serious trouble. Indeed that is too fair because the merger plan has been in trouble from the very start. It was only under duress and consequently with great reluctance that Coleraine agreed to talk at all. The polytechnic, which should of course be subject to the authority of the Northern Ireland Department of Education but in practice goes very much its own way, has seemed remarkably voluble in its attitude to the merger, blowing first cold, then hot, and now cool. As a result the steering group established to manage the merger has now been reduced to impotent factionalism, with the Government apparently unable or unwilling to assert its authority and to insist that its policy be carried out. In fact it is time some heads were knocked together. The Government, having decided first that a continuation of the status quo was intolerable and then that the dismal solution recommended by the Chilver committee was unacceptable, must stick to its own compromise. Perhaps a less complicated compromise could have been devised. But that is not the point. The Government has proposed; now it must dispose. Otherwise it will be guilty of that infirmity of purpose that has been such a prominent feature of British policy in Ireland over the years. So long as Britain remains responsible for the administration of Northern Ireland it should discharge its responsibilities with the same seriousness and same commitment as it does on this side of the Irish sea. Decent public administration cannot forever be subordinated to devolutionary (or decolonizing?) intentions. Nor can it be in the interests of either the university or the polytechnic to continue to blow hot and cold about the merger. However deep the doubts in Coleraine about the survival of university education,

especially perhaps research, within a merged polytechnic, there is now nowhere else to go. The Government, rightly or wrongly, has made it clear that it will not tolerate the status quo of two separate universities and a polytechnic. So the only realistic alternative to a merger would be the Chilver plan, which of course is completely unacceptable to NUU. At first glance the position of the polytechnic is stronger. It is the stronger of the two partners, both in student recruitment and in the important sense that polytechnic-type courses are needed more in Northern Ireland than more university courses such as those provided at Coleraine. The polytechnic is complementary rather than simply additional to the traditional university provision at Queen's. So it might be thought that the polytechnic could continue to go it alone if the merger terms appeared unattractive. In practice the polytechnic's line of retreat is as firmly blocked as NUU's. There is no way in which even the enfeebled Northern Ireland Department of Education could allow the polytechnic to revert to its former independent status as "a spoiled child" (in Dr Froggatt's unkind but accurate phrase) if it had the reins on which the polytechnic has been allowed to run for the past 10 years is not as loose as that. So for both institutions the alternative to a successful merger is bleak. The next step must be to get the steering group working properly. The group must act in a united fashion and make a genuine attempt to produce a workable plan for an Ulster polytechnic. It must not be allowed to perform as a disunited coterie of suspicious or ambitious individuals who are constantly manoeuvring for sectional advantage. In this respect Sir Peter Swinnerton-Dyer and Sir Norman Lindop, the chairman and vice-chairman of the group, have a heavy responsibility. The best way in which the group could demonstrate a sense of honest purpose is to get on with the job of appointing a vice-chancellor for the new institution which of course must be done by open competition. This will not be easy. The lack of progress so far will not encourage people of the right calibre to apply for a job which may never exist. Yet it is essential that a man or woman of substantial reputation in British higher education should be appointed as soon as possible. It is also probably essential, painful and unfair as it may be for the two interested individuals, that neither Dr Cockcroft nor Mr Birley should get the job. Perhaps their greatest service now would be to declare publicly that they were not candidates. In the short term this would clear the air and in the medium term make a fresh start possible for whatever institution finally emerges. In the end of course the plan for an Ulster polytechnic may turn out to be an unrealistic policy. There will be very great difficulty in rebuilding the morale of staff on the Coleraine campus after the shock of Chilver. A merger may deflect the progress of the polytechnic, which has been so impressive under Mr Birley's leadership, into the wrong channels. The sorry outcome could be an institution that has too large a polytechnic ingredient to continue to operate effectively as a university and that has too large a university ingredient to keep to its polytechnic mission. Then there are the unresolved issues of what to do about teacher education and how the polytechnic might relate to non-advanced further education. Sadly the present wrangling seems not to be about these substantial issues but about sectional advantages. However, a policy of merger having been chosen, an honest attempt to make it work must be made. Only when the process of examining the detailed problems of implementation has been gone through can a final judgment be made - not before it has even started.

The culture of research

The present mismatch between scientific knowledge and its practical application operates at two levels: the macro level of national culture and the micro level of the organization of research. As Sir Charles Carter reminded us in his presidential address to the British Association, far too many British firms have little appreciation of the potential benefits of science and technology to their business, and too many people in industry and government regard science as a magic box which will solve all their problems and so pay insufficient attention to how the potential benefits of scientific discovery can be organized economically and socially to produce practical benefits. Both attitudes reveal an alarming alienation from the values of science. Both are components of that failure of our national culture to make effective use of science. However that cannot be made an excuse for complacent pessimism among those responsible for the detailed organization of our national research effort. Indeed it may be that the ways in which that effort is organized contribute to this broader national culture. For example, the new creating dual support system for university research may not only be expensive and so potentially wasteful but also by emphasizing the creativity of the scientist rather than the collective organization of proper priorities may unwittingly encourage the magic-box view of science. It may be true that a nation which finds difficulty in organizing its research effort is also likely to stumble over the much larger task of organizing the effective exploitation of scientific research. This is why the issues raised in the fourth Leverhulme monograph, The Future of Research, (published by the Society for Research into Higher Education at the University of Surrey) are so important. The future of the dual support system, the involvement of industry and government, the prospects for researchers, the contribution of the polytechnics, are not simply technical or administrative issues. They reverberate through the whole research system, and so through the national economy.

Still too little literacy

National Literacy Week has come and almost gone for another year without apparently making a deep impact on public or political opinion. Despite an increased level of activity and attention from the media this year, the event has passed with little comment since UNESCO instituted its annual Literacy Day in 1966. Ministers paid their respects to the efforts of local authorities and voluntary services, and there was a welcome announcement on the future of the Scottish Adult Basic Education Unit. Since its English equivalent, A.C.S.U., has already received official approval for a further term of two years with "broadly the same level of funding" Government commitment to the work would be envied by some sections of the adult education world. Yet more can and should be done to preserve the impetus created by literacy campaigns of the 1970s. Although the problems are no longer in the early days, estimates of the extent of illiteracy still run at about 6 per cent of the adult population. With numeracy also now a concern of those in basic education, resources are stretched throughout adult education as a result. An annual week (let alone a day) can make little impression. The hardy annual Education Week has shown all too clearly that such events soon become ritualistic and predictable, providing a platform for preaching to the converted but achieving little.

Literacy and numeracy are too important to be consigned to such a fate. If UNESCO is serious about its contribution to worldwide efforts to combat the problem, it would be better employed lobbying within the United Nations for a Literacy Year, along the lines of that devoted to the disabled. At least the longer period would give time for initiatives to be thought out and coordinated. The Year of the Disabled provided some lasting benefits and has prompted greater awareness of the needs of a large and deserving group. The same could be done for the world's illiterates, rather than expending time, energy and resources on a regular, but little noticed publicity exercise.

Laurie Taylor



Is everybody here? Then let me welcome you all to the third meeting of this Labour Party Working Group of the Education Sub-Committee of the Home Policy Committee... Excuse me, Chairperson, isn't it in fact our fourth meeting? I'm sorry comrades. A silly error. Yes, I should have said, welcome to the fourth meeting of this Labour Party Working Group of the Education Sub-Committee of the Home Policy Committee. Thank you, Chairperson. Good. Now can we move to the main business of the day. Which is, of course, Item One on our agenda: Oxford and Cambridge. As I understand it there are two proposals for some slight changes in this Working Group's earlier description of these institutions as "a major cancer of the education system". Yes, Nell? Thank you, Chairperson. Yes, only a minor point. It's just that while I fully support the idea behind the phrase, "Major Cancer", I wondered if it might not be slightly, how can one put it, provocative. I would have thought "Cancer" by itself conveyed the point. Phillip? Well, I rather go along with Nell on this one. Possibly, a little further than he does. You see, I was wondering about the actual word, "cancer". It does perhaps have connotations which are a shade too terminal. Might I just for the sake of moving this matter along, propose something rather less dramatic while retaining the medical metaphor? Could you be a little more specific, Phillip? Well, I was rather thinking along the lines of, "Measles". Yes, I see. Thank you, Caroline. I think you want to come in. Is there any possibility of some sort of compromise here? I see from the paper you've circulated that you're a little unhappy yourself with this phrase "Major Cancer". I wonder if you would remind the Working Group of your alternative. Yes, certainly, Chairperson. Like Nell and Phillip I rather favour dropping the phrase "Major Cancer" but my preferred alternative is "Raging Black Plague". "Raging Black Plague"? Well, that's fairly straightforward then. One proposal for Measles and one for Raging Black Plague. Eric, we haven't heard your views yet. But I take it you're, "Raging Plague"? "Raging Black Plague", Chairperson. Oh, come on, Nell, that leaves you. Nell, you were just plain "Cancer" as I recall. Yes, indeed, but I think the analogy of room for compromise here. I mean, all of us around this table are absolutely united when it comes to generally agreeing that on the whole we want to do something about higher education. So given that general agreement, I wonder if we could resolve this little terminological problem by a formula which, now shall I put it, preserves the spirit of our original pronouncement while at the same time making it marginally less associated with this actual group. Might I, therefore, propose the sentence, "Some people have described Oxford and Cambridge as a major cancer in the educational system". But Nell, isn't that a little unclear. Which people? Do you know of any? Of course, Chairperson. We do? Why ourselves at our very last meeting.

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Publish advice, says ABRC

Government ministers have been asked to publish the highly confidential advice they receive each year on how to divide the annual Science Vote, worth £510m in 1983-84, between the five research councils. The request comes formally from the Advisory Board for the Research Councils, headed by Sir Alec Morrison, which produces the "forward look" budgetary advice in the summer each year. The final say rests with the Secretary of State for Education, who usually accepts the ABRC advice. This year's advice is known to contain important papers on how to combat the looming problem of recruiting new blood into universities, and on earmarking funds for research in information technology and space technology. Ministers will naturally feel reluctant to publish advice which might leave them exposed to criticism if they went against ABRC wishes. But it is argued the present system is complex, subject to leaks anyway, and prevents open, informed debate. A classic example of a clash of views came last year when, Sir Keith Joseph, Secretary of State for Education, decided to top an extra £1.1m off the 1982-83 budget of the Social Science Research Council against ABRC advice in favour of level funding. This year the ABRC is understood to have postponed a final decision on the size of the SSRC budget pending a Government response to the Rothchild review of the SSRC, now expected sometime next month.

£20m new blood plan considered

A fellowship scheme designed to compensate for the lack of bright young academics coming into the universities has been put to Education Secretary Sir Keith Joseph by the University Grants Committee. The committee would ideally like Government support for up to 800 new jobs per year, to make up for the shortfall between the number of jobs being offered in the universities at the moment and a healthy rate of recruitment. The fellowships, which would be a new category of appointment similar to post-doctoral fellowships in the United States would probably be for three to five years. To support 800 new staff over three years at a salary of say £8,000 would involve a Government commitment of some £20m. Confidential papers already studied by the Science and Engineering Research Council suggest that in five years time the scientific community will be short of 1,250 academics in the age group in which "the council might look for its best ideas". An internal memorandum prepared for the UGC this summer states that over the recruitment of young staff "the university system is... facing a problem for the next ten years even assuming there will be level funding immediately after 1983-84". A substantial paper on the subject was prepared by Sir Peter Swinnerton-Dyer, master of St. Catharine's College, Cambridge, for the Advisory Board for the Research Councils, which discussed the problem in July. The UGC will discuss the growing problem of lack of "new blood" at its annual meeting next week in Oxford. Throughout the summer its sub-committees have also been looking at staff mobility. Each was given a breakdown by age distribution of its subject group and asked to comment where the particular problems lay. The meeting will also consider a progress report on the restructuring exercise, which the Government has already asked for, and which will show that universities are responding positively to the huge cuts although there are random difficulties. The fellowship scheme would involve young staff initially coming



into the system as researchers only. They would then either continue as researchers until a university had a vacancy or the UGC would take over the appointment and fund it from money kept back from the recurrent grant. But there are several drawbacks. In the first case the research councils are not too enthusiastic about having to do the initial sump-priming. Secondly, the universities would not be too keen on the first option as it would tie their hands. Thirdly, under the second option, the UGC itself is uncertain about the scheme. It would mean a far more intrusive role for the committee which would decide where the new appointments were necessary and in which subjects and would greatly extend their role. A recent official report on the Support of University Scientific Research (HMSO 8567) said that new sources of cash should be made available specifically to recruit young academics. Other temporary solutions which will be considered by the UGC are extended fellowships and perhaps extension of a special replacement scheme pioneered by the SERC, allowing a young academic to take a tenured appointment while a senior academic is given more time for research. The £20m innovation fund is also likely to be raised. Sir Alec Morrison, ABRC chairman, who also headed the committee producing the SSRC report, said nothing had happened recently to lead him to believe the problem was going to be solved. "This is a genuine investment problem. One could only tolerate it if one knew the cavalry was coming soon." Sir Peter Swinnerton-Dyer said that if there were no recruits over a period of 10 years research was likely to die. "This is particularly true in science where most research is done in catalysis." The UGC memorandum discussed the chances of persuading the Government to provide extra funds, assuming ministers were sympathetic. The SERC papers, using the most up-to-date statistics on the age distribution of university staff, suggest that about one in five scientists continued on page 3

DES climbs down over quotas Mrs Thatcher called on to set up top engineering group

A furious row broke out last week when the Government told the education sub-committee of the University Grants Committee how to assign the university teacher training quotas. It is the first illustration of the Government's new resolve to direct UGC policy. Members of the UGC sub-committee protested when they were presented with a letter signed by the Department of Education and Science's assistant secretary Mr. Hugh Jenkins giving the quotas for Postgraduate Certificate in Education and BEd places for the university, broken down by subject. The universities have been given 4,500 places in all. They were told that the quotas should be brought into effect in 1983 and continue until 1985. Committee members immediately rejected the DES approach and insisted it was the role of the UGC, not the DES, who were there as assessors only, to make the decisions. The DES was represented at the meeting by Mr Philip Halsey, the under secretary, rather than Mr Jenkins, who was on leave. After a long discussion the DES retreated and agreed that the committee would give each university quotas but rather than saying how they should be assigned by subject, they are asking the universities how the numbers should be divided up. The universities will be asked to make returns by the end of September and on October 16 the Universities Council for the Education of Teachers will hold a conference, at which the UGC, DES and one representative from each university will attend, to discuss the problems of matching supply with demand. No places will be offered until November. In the public sector, staff, students and governors of threatened colleges were united in their opposition to the initial teacher training cuts as today's deadline for responses to the Government's proposals approached. Many staff of the 14 polytechnics and colleges, which face closure, returned early from holiday to organize action committees, draw up a response and launch campaigns to enlist the support of MPs and former students. The chairman of the Commission for Racial Equality, Mr Peter Newman, wrote to Sir Keith Joseph, Secretary of State for Education, about the "negative" effect which an end to teacher education at the Polytechnic of North London would have on the morale of ethnic minorities in the inner city. PNL pioneered access courses with City and East London College three years before the Rampton committee recommended recruiting more West Indian teachers. It has plans for a similar course for Asian students with Harrow Further Education College this September. The only BEd honours course in Jewish studies to train Jewish

teachers in the country will also be affected. The Levy College executive director Mr Frank H. Levine said they were "very upset" by the Government's plans since they had enjoyed good relations with PNL. The future of the Central School for Speech and Drama is also in doubt as a result of PNL's closures since it trains many of their students on BEd courses. A solicitor acting on behalf of the Catholic Education Council has informed the DES that there has not been enough time for consultation. Consequently, Newman College in Birmingham, which faces closure if its courses are axed, has not made a submission. A governors' delegation from the college will be meeting Mr William Waldegrave, under secretary of state, on September 30 to discuss the reasons for the closure decision. The City of Liverpool College of Higher Education received unanimous all-party support from its local authority sub-committee which thought the long-term effect would be to return to the difficulties experienced 30 years ago in recruiting qualified teachers. The National Association of Teachers in Further and Higher Education is also to meet ministers in the first week of October to discuss the threat to 600 lecturers' jobs. The union is likely to call a national meeting for all members, not just those who are immediately affected.

After the meeting some of those present drew up a paper which would effectively create an agenda for the high level group they recommend. It recommends a substantial increase in undergraduate engineers in the figure of 15 to 20 per cent has been mentioned - improving and re-equipping engineering department facilities, and a focus on the training of technicians. No sums of money were discussed, but the bill for such a programme would be huge; a 20 per cent expansion in university engineering undergraduates alone would cost around £40m a year, with re-equipping a shorter term but larger commitment still. Behind the proposals is the now-familiar saga of Britain's outdated attitudes to engineering and the fears that it is falling behind in the technological race. According to Dr Tolley, Mrs Thatcher's guests told her that recent initiatives to increase engineering student numbers were not on the same scale as the overall policy change they were recommending. Her emphasis on the creation of an additional planning group - albeit short term - also puts a question mark over the status of the new engineering Council which, although represented at the lunch by Sir Kenneth Corfield, has clearly not yet established its authority to speak for the industry and subject as a whole.

Top industrialists and academics have set a six months deadline for the Prime Minister to approve a massive new investment in engineering education. Their urgent statement came in a paper sent to Mrs Thatcher last month. It called on her to create immediately a small pressure group of engineers and civil servants from various government departments, to draw up a plan of action within six months for a huge boost to engineering. The paper is the result of a lunchtime meeting called by the Prime Minister, officially head of government science policy, in April. Among those invited were Sir Kenneth Corfield, chairman of the new Engineering Council and of Standard Telephones and Cables, Mr Dennis Allport, chairman of Metallbox B.C. Dr George Tolley, principal of Sheffield City Polytechnic, information technology minister Mr Kenneth Baker and under secretary of state for education Mr William Waldegrave, raved. According to Dr Tolley, the Prime Minister wanted to discuss whether higher education was supporting high technology industry. "There was a pretty concerted statement from industry and education that we felt that a quite considerable expansion in output of scientists and technologists was necessary," Dr Tolley said.

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News in brief

ACACE compiles progress report

Dr Richard Huggart, chairman of the Advisory Council on Adult and Continuing Education has written to every local authority director of education in England and Wales asking for a progress report on their continuing education provision.

Demolition charge

Dr Rhodes Boyson, under-secretary of state for education responsible for schools, has again condemned Labour's policy document on higher education, accusing the party of being a "political demolition contractor" in advancing more open entry to universities and colleges.

Legal loans

A special loan scheme for law graduates taking professional examinations to qualify as solicitors has been introduced by Midland Bank. During the period of study and for 12 months after, the rate on an unsecured loan up to £2,500 a year will be held at four per cent per annum.

Vicarious viewing

One of the first programmes on Channel 4 is to be monitored by the Rev. Brian Brown, of the department of educational development at Oxford Polytechnic. The TV series has awarded £5,300 for a study of The Tube, a youth/rock music series, to evaluate its effectiveness.

Ariane flies on

European Space Agency scientists could take weeks or even months to find out precisely why the first commercial flight of the Ariane rocket failed so spectacularly.

Foyle's ban

College lecturers are being asked by their union, the National Association of Teachers in Further and Higher Education, to boycott W. and G. Foyle Ltd, the Charing Cross Road bookshop, until it concedes the right of its employees to join a trade union.

Wadham gift: doubts grow

New doubts over the deal between Wadham College, Oxford and a Hongkong millionaire involving the "selling" of two places emerged this week when the college revealed it had not received any news of the promised £500,000 benefaction for several months.

Fund-raisers lose their appeal

by Jon Turney Most British universities which have used professional fund-raisers would do the job themselves in future. This finding comes from a nationwide survey conducted for the Standing Conference of University Information Officers, and presented to their annual meeting at Kent University this week.

The questionnaire was sent to every university except Oxford and Cambridge, and 20 of the 42 respondents said they had run appeals in the last five years. Most had run the appeals themselves, but eight employed a fund-raising company and one retained a fund-raising company for advice.

Only the university which restricted its dealings with outside consultants to advice was "very satisfied" with the results. Two of the other eight which sought expert help were satisfied, four moderately satisfied, one not satisfied and one very unsatisfied.

Respondents critical of fund-raising companies said they took too high a percentage of the sum raised, they took an impersonal approach or were insensitive with prospective donors or did little more than the university would have done on its own.

One delegate said later that the cost should be assessed as a percentage of the sum raised over and above the amount the university might have attracted by acting alone.

More generally, delegates felt that while some professional fund-raisers did a good job, they had no special expertise or magic formula.

Three of these nine said they would use the same company again, but five would do the job themselves another time, with one institution undecided. All four universities which described themselves as "moderately satisfied" with their fund-raisers would rely on their own efforts in the future.

The questionnaire also showed that appeals are likely to become more widespread. Seventeen of the 22 universities which had not held an appeal for funds said they were thinking of doing so.

Most of the appeals already launched had specific targets, usually well over £100,000, with the most ambitious trying to raise £4m. Most were still running, although one of the more modest appeals had already reached its target.

Survey arouses suspicion

A Social Science Research Council survey asking university departments to indicate areas of specialist interest has provoked renewed suspicion about the switch towards greater emphasis on policy-orientated research work.

The SSRC wrote to all social science departments in July asking for information about topics "on which they would feel qualified to supervise students" to help in preparing their six new topic-orientated subject committees.

The SSRC says the survey is simply a way of collecting data useful to a new committee chairman. But some academics have interpreted it as another subtle step towards steering both research and the allocation of postgraduate student awards.

The SSRC defines topic as a research subject or problem on which "several closely related lines of inquiry are under way or could be closely launched so that several theses or several faculty research projects could be generated from it".

Bias of sociology courses attacked

A bitter attack on "politicized sociology taught as religious dogma" is contained in a wide-ranging book of essays on educational policy published this week by the Centre for Policy Studies.

The book, The Right to Learn, sets out to "promote more information, more choice, more accountability, and more diversity" in education. Student loans, education vouchers, and a review of tenure, are ideas advocated by the authors, many linked to the Conservative Party.

The book also contains a section repeating criticism of Open University courses and alleging that some have been "so politically biased and intellectually weak as to cause great disquiet".

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On the OU, the authors say that what matters is "the gross bias" of the courses together with the dishonesty of allowing subjects to be portrayed under misnomers.

The authors conclude by suggesting that the number of sociology departments and students should be reduced, a similar recommendation to one made by Lord Rothschild in his review of the Social Science Research Council. The authors also want the subject restricted to post-graduate students, and taught by staff who have had work experience.

In another essay, the book recommends that most student maintenance costs and possibly a proportion of fees should be met by loans rather than automatic grants.

Professor Stuart Hall said this week that if there has been any selectivity in his research into the media this was because his studies were exclusively concerned with Britain.

The authors single out a number of academics including Professor Ralph Miliband, formerly of Leeds University and Professor Stuart Hall of the Open University. They accuse them of "massive selectivity in refraining from subjecting socialist societies" to comparable criticism made of capitalism.



University bus campaign takes to the road

A new campaign launched this week by university teachers, involving advertising on London buses and the Underground, nearly had to be abandoned because London Transport objected it was "political".

London Transport initially thought the slogan was political and spent nearly three weeks discussing the advertising, according to an Association of University Teachers source. Eventually it had to go to the LT board before it could be approved.

The campaign will be directed at the general public and, according to the AUT, will do the job the Committee of Vice-Chancellors and Principals has failed to do. It will point out the myths that there are too many universities that more means worse; that research is not relevant to the country; that demand for places has slackened; that Britain cannot afford higher education; and that university teachers are privileged, with secure jobs.

Tory students reject changes

Conservative students have thrown out proposals for constitutional changes drawn up by senior party members in an attempt to restore confidence in their national organization.

The reforms were meant to curb the alleged excesses of the organization by increasing its accountability. Mr Brian Monteith, chairman of FCS, admitted being "a bit disappointed" at the outcome. It has become clear that none of the three main groupings within FCS is big enough to ensure a two-thirds majority for any new proposals which may be put forward in December.

Almost all delegates to FCS's half-yearly conference in Cardiff dismissed the proposals as unworkable, but they agreed to abolish the federation's student affairs committee.

Cancer smear amended again

The Labour Party this week further toned down references to the "cancer" of Oxbridge in its leaked draft document on post-16 education.

Prompted by fears that the debate could be deflected by concentration on what was only included as an illustration of criticisms levelled at Oxbridge, the party's powerful home policy committee decided on Tuesday to make absolutely clear that this was a view not endorsed by the party.

The education sub-committee had earlier tried to stress the distinction between reported and endorsed views. But Mr Phillip Whitehead, the party's spokesman on higher education, felt that further emphasis was needed.

Schoolteachers to monitor trainees in the classroom

Schoolteachers are to become higher education staff and tutors of students on Post Graduate Certificate in Education courses under a new scheme launched by the Department of Education and Science.

The pilot project, based in two universities, polytechnic and an institute of higher education, will run for three years and be monitored by Professor Paul Hirst and Dr John Furlong, of Cambridge University. It is expected to cost £1.40,000.

Students at Leicester and Sussex Universities, Leeds Polytechnic and the Rochampton Institute will spend more than half their course over a continuous period in schools attached to a member of staff, who will also be responsible for assessment. Ministers are expected to steer more institutions into this practice if results are successful and possibly to expand the experiment into Bed courses.

Give Falklands to Argentina

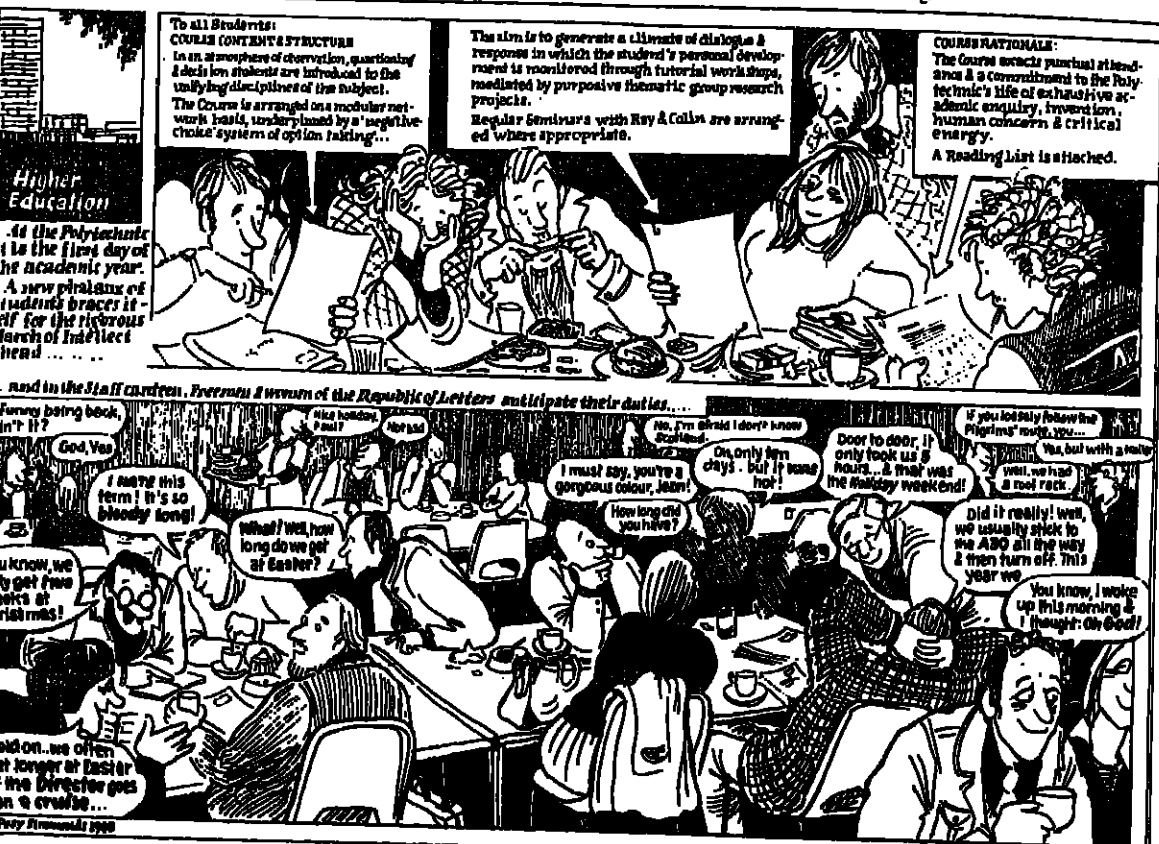
Seventy-three academics have signed a statement asking for the return of the Falkland Islands to Argentina. They point out that the use of force by both sides has not led to a solution of the conflict, and call on the British Government to initiate a new round of negotiations.

The resolution was sponsored by Peter Worsley, Professor of Sociology at the University of Manchester, and David Lehmann of the Centre of Latin American Studies at the University of Cambridge. Around half are Latin American specialists.

They see the Argentine claim to sovereignty as the only viable one, given the tiny population of the islands, but insist that islanders who choose to leave be compensated, and that those who stay be guaranteed cultural freedom and a degree of participation and regional autonomy.

Secretary named

The former vice principal of the now-closed Hamilton College of Education has been appointed general secretary of the Scottish Further Education Association. He is Graham Allison.



Telling it how it really is... cartoonist Posy Simmonds has brought out her third collection of the activities of The Silent Three, first seen in The Guardian. Pick of Posy is published by Jonathan Cape at £5.50.

No ruling on recognition complaint

The local government ombudsman has told a non-TUC lecturers' union he cannot investigate its complaints at the way the Inner London Education Authority advised two polytechnics on a recognition claim.

Baroness Scruton, the Commissioner for Local Administration, decided after considering allegations of maladministration from the Association of Polytechnic Teachers, that they were outside her remit because they dealt with personnel questions.

Mr Gwyn Jones, chairman of the London committee, said: "We believe Mr Fletcher should not have behaved as he did. We also believe that the courts of two polytechnics were misled."

Higher grades for poly places

A substantial improvement in the A level grades of students accepted for places at polytechnics is reported, with increases of up to 20 per cent in average points in some cases.

Leicester Polytechnic said, places have been amply filled with increased A level grades of up to 20 per cent. This has been especially so in degree courses in business management, law, chemistry, accountancy and art and design.

It has introduced a seven-day limit on offers for the first time, during which time students must reject or accept an offer.

Leicester still has unfilled courses such as textiles. Where the recession has affected the career prospects in a subject, applicants have also been few. Other subjects, such as business studies, finds they could have recruited three times over.

The allocation of polytechnic places for mature and other special cases earlier in the session also meant that places have been restricted for those students with good academic results in line with the polytechnic tradition of opening the doors to disadvantaged students.

The improvement in exam grades is not just the result of more rejections from universities. A Trent Polytechnic representative said that although one faculty had asked for up to seven points for degree courses and three for HND courses, this reflected a natural upward progression.

In this respect, mechanical and production engineering have done well whereas in sciences, although higher grades were asked for, modest gains have been sufficient to get acceptance. Business courses, economics and social sciences have been asked for several A level points higher than last year.

Advertisement for Wolsey Hall Oxford, featuring the text '86% success in degree exams' and listing various courses offered such as BA Honors, English, French, History, Geography, Philosophy, LL.B., B.Sc. Econ. B.D., Diploma in Education. It also includes contact information for the school.



# Social work exam merger proposed

by Paul Flather

Divisions and misunderstanding between the two main social work courses, the Certificate in Social Services and the Certificate of Qualification in Social Work, should be eliminated and the courses merged into one, according to the main college lecturers' union.

The 73,000-member National Association of Teachers in Further Education is keen to gauge the views of local authorities, employers, staff, and so-called qualifying course could meet the general and specific needs of social workers by using a modular system.

The submission has been sent to the Central Council for Education and Training in Social Work which has set up an official review to find if the CQSW and the CSS courses are still the most appropriate in a climate of contraction rather than expansion.

After 10 years of work the council is keen to gauge the views of local authorities, employers, staff, and social work lecturers on relations between the two courses.

The union also proposes the course should be for two years if taken full time, or three years otherwise, and should be followed by a consolidation year in employment.

The deadline for submissions to the official review is the end of September, and a response is not expected before 1983.

Natfhe believes the two courses have led to divisions within the profession, and misunderstandings about the relative status of the two qual-

ifications. It points out that skills required to work with clients in residential, day care or field-work, have much in common.

Ms Nancy Rees, Natfhe's education secretary, said: "A single qualifying course based on a modular structure would meet the needs of both professional social workers anxious to avoid premature specialization and staff motivated to work with particular groups."

Natfhe proposes a single course with a "core of knowledge" equipping social workers to work with individuals or families, supplemented by extra modules providing specialist skills.

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# A passport to flexible education

by Karen Gold

A unified system of course accreditation and interchange starts in Manchester this month, with the first term of the city's Open College Federation.

The federation, linking all tertiary education institutes, was established by Manchester City Council at the end of 1981, after over a year of discussion between the city's higher, further, adult and community educators on the possibility of a flexible credit transfer system.

They agreed upon an open college comprising four levels of course: basic literacy and numeracy, post-basic education, O level and related courses, and A level standard courses. A governing body with representatives from all the institutions - although with no power to intervene in the running of individual institutions - accredits each course and decides which level it is to reach.

For this first year no new courses have been created. Most of those accredited have been at the lower levels, but the federation hopes to increase advanced level accreditation, and to set up new courses to fill gaps in provision.

Students can enter and leave the college at any level. On registration they pay a small fee for a "study passport" which records their courses and credits. For each credit 50 hours' work, including private study, will be required, with more private study and tutor-marked assessment at the higher levels.

Accredited classes will remain open for non-federation students; their involvement is safeguarded by the registration system which continues to enrol all students and asks those wanting open college passports to register afterwards.

The governing body's course recognition committee has set up six panels, to cover combined studies, humanities, literacy, numeracy, science and technology and social science and business studies. Panel members will come from federation institutions - Manchester, University of Manchester Institute of Science and Technology, Salford and the Open University - Manchester Polytechnic, Manchester College of Higher Education, all the city's centres and colleges of adult, community and further education and the Workers Educational Association.

The local Chamber of Commerce and trades council are also represented: the federation's initial aim, to increase access to higher education, has been enlarged to the hope that their passport will help students into jobs.

The adult literacy and basic skills unit and the Government's further education unit have already given money to support a federation organiser to find suitable classes.

Manchester's senior assistant education officer, Mr Michael Sterne, said interest in the college had been shown outside the city; in particular North Cheshire College was sending observers to the governing body, and the federation might eventually spread throughout Greater Manchester.

It differed from the Lancashire Federation which began at Nelson and Colne College, in that Manchester had no set pattern of courses for students to follow, he added.

"I think it will have a dramatic effect on our whole attitude to the provision of adult education. Our intention is that there should be a very wide range of courses accredited, as part of a process common in the United States, so people can decide if they want courses for recreational interest or as a route to further study."

Care for children during adult education classes is the subject of a national conference organized by the Women's Advisory Committee of the Workers' Educational Association in London on Saturday September 14.

# Now Yiddish Centre to erase cultural barriers

by Paul Flather

Police cadets and their trainers will take part in the first course at Bradford University's new international centre which aims to break down mutual distrust between different cultural groups.

Approval for the first series of courses came last week at a meeting of the advisory council of the International Centre for Inter-Cultural Studies (ICIS) in Bradford, where one in six people is an immigrant or of immigrant descent.

The courses will strive to explore the mismatch of views between different groups in British society, involving workshops where people can frankly exchange personal experiences.

Dr Gajendra Verma, reader in inter-cultural education and ICIS director, said the real problem now was to tackle mutual distrust between groups. "The most obvious example is mistrust between the police and the community. It is not just the police, the community does not understand the role of the police either."

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theology 973 n.  
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education 534 n.

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## North American news

### Saxon steps out of the spotlight

from Charlotte Beyers

**PALO ALTO** David Saxon, 62-year-old president of the University of California has decided to step out of the spotlight and return to teaching physics because of his "instinct for self-preservation".

"I am conscious of the fact that many people stay on for too long. I still feel enthusiastic about being president. I don't want my idealism to evaporate," he said.

Saxon began his term as president of the multicampus system that has been called one of the world's finest public education systems in 1975. He has presided over an institution that includes 125,000 students, 97,000 employees and 6,500 faculty members including 15 Nobel laureates on its nine campuses and five medical schools.

His salary is \$91,520 a year. "When I came to the administration as vice chancellor at UCLA, it was the beginning of the student unrest over the Vietnam war. Then we moved into a situation of financial pressure. Each year, there is always something."

During his tenure he has battled with California governor Jerry Brown over his attempts to try to make the regents cut ties with two US Department of Energy nuclear weapons labs at Los Alamos, New Mexico and Livermore, California.

The university has constitutional autonomy. It is ruled by a 28-member board of regents and not the legislature. During the last few years the legislature has enforced increasingly stringent cuts in the university's \$1.2 billion budget.

The legislature is currently proposing that fees be charged for students entering the professional schools of business, engineering, medicine and law. President Saxon is against forcing students to pay any tuition.

He calls Proposition 13, designed to lower taxes on private property, "a wound of staggering proportion" for California. "It has proved much too blunt an instrument. The measure reduced the taxes on my house in Los Angeles by a factor of 3. But insufficient attention was paid to the needs of schools," Saxon says.

Despite the need for continuing budget cuts, the UC president remains firmly optimistic. He finds an emerging consensus about the importance of education. "We have lived through 10 years of disenchantment with the schools. The state board of education is taking a harder look at our poorly prepared students. We must start working with youngsters on all levels and particularly in grade schools. It's too late to start in junior high school. It takes 15 years to produce engineers from minority backgrounds."

A native of St Paul, Minnesota, Saxon earned both his bachelor's degree and his doctorate at the Massachusetts Institute of Technology. After joining the faculty at UCLA, he resigned in 1950 rather than sign a loyalty oath, but returned in 1953 when the California Supreme Court overturned the ruling. Saxon became a full professor in 1958 and was made chairman of the department in 1963. In 1966 he was made dean of physical sciences and became executive vice chancellor in 1968.



David Saxon: 'always pressure'

When questioned about his role in affirmative action, Saxon says that the problem is enormously complex. "It may be the major social issue of our time."

"Ours is the only country which has successfully brought together people of diverse origins and transformed them into a successful nation. Ours may be the first truly multi-racial nation. How do people of French or British extraction who are also Americans compare with Argentinians in the Falkland Islands?" he wondered.

Although Saxon believes that he did all he could to see that women and minorities entered the university as administrators and faculty, regent Yori Wadn disagrees. "I think he could have done a far more aggressive job," he said.

Vice president Fretter notes that as a result of Saxon's tenure there is greater cohesion among all the campuses. His practice of regular monthly meetings with the chancellors has helped bring a broader perspective to the entire system.

Saxon will continue as president until July. The chairman of the board of regents, Glenn Campbell, will form a national search committee to seek his replacement.

The president says he is looking forward to teaching again. He will be returning to the University of California at Los Angeles where he began his career in 1947 as an assistant professor in the physics department.

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### Pentagon censors optical engineering papers

Leaders of America's academic science community expressed dismay last week when they learned that the Pentagon had prevented more than 100 papers from being given at an international conference on optical engineering.

The incident, which took place last month but did not attract public attention for several weeks, has reopened a sharp debate between the universities and the Department of Defense over the right of academics to publish military sensitive scientific findings.

Mr William Carey, executive director of the American Association for the Advancement of Science, described the Pentagon's action as a "random strike" against unclassified scientific research.

Peter David, North American Editor, The Times Higher Education Supplement, National Press Building, Room 541, Washington DC 20045; Telephone: (202) 638 6765

Organizers of the meeting, an annual symposium of the Society of Photo-optical Instrumentation Engineers, said the Pentagon's move was unusual on two counts: the number of papers barred was unprecedented and the decision to block them appeared to have been taken at the last minute.

About one in six papers due to be delivered at the conference were ordered to be withdrawn and many participants were informed of the decision only a week or two before the meeting.

The Pentagon was able to block the papers because many of them reported on work which, while not classified, had been funded by the Department of Defense.

Officials said some of the information contained in the papers required a licence under the International Traffic in Arms Regulations before it could be published at an international conference.

But the nature and timing of the incident appeared to embarrass Mr George Keyworth, President Reagan's science adviser. Mr Keyworth, who has been working

### Equality ruling unopposed

from Peter David

**WASHINGTON** A long-running controversy over the legal rights of women in education took a bizarre turn last week with a decision by the Justice Department not to challenge a lower court ruling which is expected to blunt the government's powers to enforce sexual equality.

The lower court ruling came two months ago when a federal judge dismissed a sex bias case against the athletics department at the University of Richmond. In a strongly worded opinion, Judge Dorth Warner said the federal government, which had brought the case, had no jurisdiction over a university department which received no direct federal money.

Civil rights groups, including the government's own Commission on Civil Rights, claimed the Warner decision could decimate a broad range of civil rights legislation. The Justice Department was confidently expected to appeal to a higher court.

Last week, however, Mr William Bradford Reynolds, the attorney general, said the government would not challenge the ruling. He said the Department of Education did not wish to take the case further and the Justice Department believed the Warner decision to be legally sound.

The attorney-general's announcement has infuriated women's groups, many of which believe the Reagan administration is deliberately seeking ways to avoid enforcing longstanding civil rights laws designed to protect the rights of women in education.

Ms Margaret Kohn, of the National Women's Law Centre, claimed the decision not to appeal had been taken for political rather than legal reasons. She said the government could have appealed on a number of strong legal grounds.

The legislation at the centre of the argument - Title IX of the 1972 Education Act - has been a source of legal confusion for several years. The act said that nobody should be excluded on the grounds of sex from any educational programme receiving federal funds.

But educational institutions have repeatedly questioned the way in which the Department of Education receives federal money. Many colleges taken to court under the act claimed it was intended to apply only to programmes receiving specific earmarked funds from the federal government.

Women's groups contend the act is intended to cover any activity within an educational institution which benefits from government funds.

## Overseas news

### Migrant teaching gets special cash

from Geoff Maslen

**MELBOURNE** The Australian government will spend A\$1,870m on tertiary education institutions in 1983, according to a report of the Tertiary Education Commission tabled in the federal parliament last week.

Nearly A\$1,670m will be available for higher education centres and A\$205m for technical and further education colleges. Funds for capital and equipment expenditure for higher education are A\$4.2m more than for 1982, but A\$31.4m below the level proposed by the commission for 1983. Total funds for the tertiary and further education sector (TAFE) are slightly less than the amount provided in 1982 and A\$12.6m less than the level recommended by the TEC.

Recurrent grants for the higher education sectors will be maintained at the 1982 level. In a new move, 15 per cent of TAFE Particular Purpose Recurrent Grants will be earmarked for advanced English language instruction for migrants. Technical and further education groups attacked the decision, claiming there was no evidence it would achieve its desired objective. The interests of migrants should not be played off against existing programmes and full-time funding should have been provided, a spokesman for the Association of TAFE Teachers said. He said that in 1983 TAFE would receive only 7 per cent of the government's total expenditure on education, yet it had nearly a million students enrolled.

Referring to the government's prospective allowance scheme which anticipated cost increases calculated and allocated before each academic year begins, the TEC said the 1982 allowances would fall short of actual cost increases, and adjustment to the allowance to cover the shortfall would be required if the level of activities recommended by the commission and supported by the government were to be maintained.

But in tabling the report in parliament, Senator Peter Baume, the Minister for Education, made no mention of the government's attitude to this recommendation. Senator Baume also handed down the government's response to a report by a committee of inquiry into

management education in Australia. The major recommendations in the report referred to rationalization of programmes of management education offered by various higher education institutions around Australia; the establishment of a second graduate management school at Melbourne University; the concentration of part-time MBA studies in one management school in each mainland state; the provision by other tertiary institutions of a variety of programmes encouraging wider access to management education; and the creation of an Australian foundation for management development.

The report attracted considerable criticism, especially from the institutions which would lose their management education schools. Senator Baume said the government had accepted the recommendation to establish in 1983 a second graduate school of management with a national role at Melbourne University which, along with the graduate school of management at the University of New South Wales, would offer the only full-time programmes towards degrees of MBA.

Senator Baume said the commonwealth would provide an extra A\$4m towards the construction of a building for the school but the university and the business community would be expected to meet a significant part of the total cost. He said the report's recommendation of limiting part-time MBA programmes to one institution in each mainland state would reduce the external MBA course offered by Deakin University to a postgraduate diploma and would limit colleges of advanced education to offering only diplomas in business administration, although some offered well-regarded MBA courses.

While the government agreed that there should be rationalization of programmes of management education and of concentrating resources for part-time MBA courses, Senator Baume said there would be no immediate changes until submissions were considered from state authorities and the institutions that would be affected. He said that as for an Australian foundation for management development, he would put proposals to the government before the 1983 budget.

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### Students led astray, says media

Summary court proceedings against Polish students and school pupils arrested for participation in demonstrations on August 31 have been widely publicized in the national and local press, apparently on government instructions to minimize the role of genuine workers in the protest marches.

The court reports say the young people concerned have been "led astray" by "subversive elements" and/or foreign radio stations. They significantly ignore one major "subversive" force which might well be expected to exert an influence - the banned independent students association (NZS).

This reticence is in marked contrast to Moscow Radio's Polish language service which, only a few weeks back, launched a virulent attack on underground (NZS) groups, alleging that they were primarily responsible for the continuation of the protest. During the last

few weeks, the only references in the official Polish media to the NZS have been a few brief notices of former NZS activists who have come out of hiding and surrendered to the police. All such reports end by saying that the activist was set free after "making the necessary explanations". The implication from these reports is clearly that the NZS is now safely dead and buried, an attitude which, the reports on court proceedings over the last two weeks, seem to continue.

According to NZS's representatives abroad, organized activity does appear to have ceased throughout Poland except for a small cell in Krakow. Members of the party-linked Union of Polish Socialist Students however reported at the end of last month that former active members of NZS to form clandestine groups, reluctant to mix with their fellow students.

Recently there have been strong

rumours throughout Poland of a show trial in preparation against Jaroslaw Guzy, former chairman of NZS, and possibly some other leading activists still, like Guzy, in internment camps. For its part, the five person Temporary Coordinating Committee of underground Solidarity continually stresses the need to involve students in its plans for an "underground society" - a programme of political self education, social self help, and continued passive resistance, rather than urging a separate student movement.

With the approach of the new university year, the authorities undoubtedly fear a resurgence of student unrest. The sentences of six months to a year imposed on participants in the August 31 demonstrations, will, Warsaw Radio commented write off these young people's plans for the future. Such students, the commentator warned, "are not children any more" and will be held responsible for their actions.

### Eire turning out too many doctors

from John Walshe

**DUBLIN** Jobs cuts in the health services have sharpened a renewed debate about the "over-production" of doctors from the Republic's five medical schools.

Medicine is probably the longest, most expensive and most sought after higher education course in Ireland with only the brightest young people securing a place.

Warnings, over the years, of diminishing job opportunities have resulted in a small drop in the numbers seeking places. These warnings have recently been repeated by two separate groups of doctors and have been given impetus by the cuts ordered this month by the Government.

Instead of the modest expansion that many felt was necessary in the health services, the Government has ordered a 5 per cent cut in staff to be achieved by the end of 1985. The decision affects all health boards, hospitals and agencies such as the Health Education Bureau and the National Rehabilitation Board.

But, even without the cuts, Eire was still turning out too many doctors, according to the Postgraduate Medical and Dental Board and the Junior Doctors' Group of the Irish Medical Association.

The board, an advisory body to the Minister for Health, claimed that Eire was turning out 100 doctors more than it needed each year. It said that, in the past, over-production of Irish medical graduates was a way of life and many Irish doctors

emigrated shortly after graduation to the USA, Australia, Canada and England - some with the intention of gaining specialist experience with a view to eventually returning to settle in Ireland. But these overseas opportunities were no longer available.

The Irish Medical Association group was even more alarmed. It said that at most 210 graduates per annum would meet the country's requirements - 160 less than was currently produced. The group warned, that unless there was a change, at least 1,600 doctors over the coming decade would have little prospect of career opportunities in Ireland and little realistic hope of emigration.

It said that there was a pressing need for the establishment of a manpower training commission with statutory powers to review the situation regularly and make recommendations accordingly. "There is no political, economic or personal sense in the current waste of medical manpower", it added.

There is no immediate prospect of such a commission, but a sub-committee of the Higher Education Authority is investigating the situation. The authority had got a measure of agreement some years ago for reducing the intake of new Irish medical students to just over 300. This has not yet been achieved, and the enrolment in the current year will be in the region of 350 to 370. The authority agreed that there was still some over-production of doctors but argued that it was not as excessive as some of the medical groups claimed.

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### Medical ties with South Africa cut

from Craig Charney

**JOHANNESBURG**

Another international student body has decided to cut its official ties with South Africa.

The International Federation of Medical Students Associations recently voted to end all contacts with the South African Medical Students Association (SAMSA).

The South African association represents medical students at the three Afrikaans-medium medical schools. The country's three English-medium medical schools withdrew after the others refused to condemn the defects of apartheid on community health.

SAMSA resigned from the international body in 1981, following overseas criticism of its political views.

The motion to cut all links was tabled by the Danish Medical Students Association, which had asked the English-medium schools whether SAMSA had changed its position. At a seminar in July, representatives of the English medical students decided to recommend against SAMSA's readmission.

Despite the severing of ties with the national body, the international federation voted to continue contacts with individual medical schools and faculties, which will enable them to keep in touch with enemies of apartheid.

### University closed in Kenyan crackdown on students

**NAIROBI**

The University of Nairobi and its constituent college, Kenyatta University College, remains closed and Mr Joseph Kamotho, the Kenyan Minister for Higher Education, has advised journalists to cease speculating when the two institutions will be re-opened.

All questions on the fate of the students were to be directed to him, Mr Kamotho said, because the students took an active part in the abortive August 1 coup against the government of President Daniel Arap Moi and in the subsequent looting that followed the breakdown of law and order.

About 30 students leaders are being held by the Government for questioning in connexion with the coup attempt.

The government also reported that more than half of the 159 people who died were students of the two institutions caught in the cross-fire between the loyal army (infantry) forces and the Kenya Air Force rebels.

The government said the students were either shot while looting or publicly demonstrating their loyalty to the KAF rebels.

The Government announced that its loyal forces found several assault guns and thousands of rounds of ammunition at the residence of Nairobi's hall of residence. Most students being held are drawn from the Student Organization of Nairobi University (SONU) which has a membership of 7,000.



The National University of Singapore had to approach its Minister of Education and then petition the Earl Marshal of the College of Arms, in London, to obtain the new coat of arms above. This lengthy process, which took 17 months, was chosen after internal attempts to find a new design produced no agreement. The coat of arms incorporates the symbols of the former University of Singapore and Nanyang University. A flag bearing the new design is now being produced.

### Transfers may be approved

from D. B. Udalagama

**COLOMBO**

The University Grants Commission of Sri Lanka has received "quite a number" of requests from undergraduates for transfer to prestigious courses of study (engineering, medicine and law, in particular) on the basis of better performances than expected at A level.

In consequence, the UGC is re-examining a current rule which precludes students who are following courses of study in a university from gaining admission to more prestigious courses on the basis of their A level performances, the results of which have been released after their admission.

The UGC has now called for details of undergraduates who have been adversely affected by the rule. Students who have applied to switch courses on the results of A level held in April or August last year but whose applications were rejected on the grounds that they were already at a university have also been asked to send in particulars.

The UGC recognizes that the current rule is tough but argued earlier that, if a precedent were set, the floodgates would be opened and

there would be demands from previous years as well. It has also pointed out that students who would have filled the places which went to those who subsequently ask for transfer were denied admission, and others who would make it in medicine and engineering must also yield to those transferring.

A charge of racism at the University of Sri Jayawardhanapura, "apparently with the connivance of university officials at the highest levels", has been made by the president of the students' union of the University of Colombo, in a letter to President J. R. Jayawardene, who is also the Minister for Higher Education.

According to Mr. Deepthi Lamahewa, president of the Colombo University's student union, a group of first year Tamil medium students reading for the BSc in business administration were "forced" to stop attending lectures and continuing with their course work due to "racial sentiments being whipped up by certain student groups apparently with the connivance of university officials at the highest levels." They have refused to return to the campus.



# The thoughts of 'Red Ted'

John O'Leary reviews a topical new book by the former vice chancellor of Bradford University

Known in Bradford as Red Ted, Professor E. G. Edwards was a far from conventional vice chancellor. He was often to be found clatting in the students' union bar and could prove a stubborn opponent of Government or University Grants Committee policy. Bradford was the last university to introduce discriminatory fees for overseas students; for example,

His book, *Higher Education for Everyone*, published yesterday, indicates that retirement has not altered his radical outlook or caused him to lose touch with the great academic issues of the day. Indeed, the book could hardly be more topical, following hard on the heels of the Labour Party's controversial report, *Education after 18*, and making a closely argued case for just the sort of higher education system that report implies.

Over almost 200 pages, Professor Edwards traces and accounts for the massive expansion of higher education in the last 120 years, analyses the forces which produce social imbalance in the student body, and puts forward his own recipe for "a policy for universal higher education". It is a policy which comes as no surprise to those who have followed his contributions to various academic conferences in recent years and which, he freely admits, is not capable of realization by higher education institutions themselves.

For Professor Edwards wants to turn traditional higher education on its head, ridding it of the elitism which he finds throughout the Western world and making it available to "almost everyone". Present Government policies, he writes in a post-

script, will accentuate the existing trend towards even more complete domination of student places by the middle and upper classes.

"Assuming that the universities continue to select mainly on past examination performance we may readily calculate that the majority of working class candidates will have been squeezed out within a decade," he claims in an examination of the effects of last year's university cuts. And he adds: "We are now set on a political course which must, if unchecked, return us to a degree of social elitism in higher education, not of the pre-Robbins, but of the Victorian period."

Neither, he argues, will the cuts necessarily prove cost-effective, particularly if the Conservatives lose the next election. He estimates that redundancy compensation will outweigh the savings in running costs during the life of the present Parliament, causing the average cost per student to rise sharply. A reversal by another Government would leave no savings and would prove expensive to correct.

Meanwhile, upwards of 40,000 students, "mainly from the working class", will have lost their chances of higher education and the talents of 10,000 academic staff wasted. The first priority, Professor Edwards believes, should be the restoration of the Robbins principle of a place in higher education for all those qualified and willing to enter which would require regular annual budget increases of five to six per cent.

This would not begin to tackle the problem which is at the core of Professor Edwards' book: how to encourage the manual and semi-skilled



Professor Edwards: radical outlook

classes to increase their share of student places. That they do not do so is a well-known fact but one on which interesting new light is thrown. For this the author looks not just at Britain but also at Western Europe and the United States, examining recruitment to higher education over what he calls "the century of international expansion". Many of the factors normally associated with the explosion of demand, from birth-rates to Government policies, from the 1944 Education Act to the Robbins report, are either discredited or real causes throughout the period. Professor Edwards believes, has been the growth of the professional and managerial classes and their perception of the benefits of higher education.

The similarity of growth is demand throughout what he terms "Little Europe" suggests that individual Government policies cannot take the credit. And the points at which growth has been unusually rapid he sees as evidence of spontaneous reactions to industrial revolutions. Although 80 per cent of those who

have ever received higher education are still alive today and by far the greatest student numbers have been seen in the last two decades. Professor Edwards describes a steady and remarkably predictable growth for most of the last century. Having taken off as a response to the industrial revolution, the growth in student numbers can be seen as an exponential curve closely following the expansion of the groups which have always provided the vast majority of students. Even the Second World War caused only temporary disruption of the curve before emergency measures brought numbers almost precisely back on target.

"We shall suggest that higher education has had an analogous self-propelled mechanism of expansion," he writes. "In brief, we may say that the speed of growth of student numbers depends on the number of people who have already been highly educated, or perhaps more accurately, on the number of people in the social classes where the graduates find their place."

It is precisely this phenomenon which has produced such under-representation in the working class. While the middle classes have come to regard higher education as a natural and valuable step, even a necessary one in the most recent period of technological and social change, it is an alien concept to the majority of the population. Those teenagers who have had no contact with graduates and no family tradition of even considering school education tend to be attracted to universities or polytechnics in special and unpredictable circumstances.

Professor Edwards claims that as many as 80 per cent of the children of the professional classes were finding their way into higher education during the peak years, while the child of a manual worker was 100 times less likely to find a place. "The question of their native ability hardly ever arises, since, by the time it might have been called into play, it is already too late," he writes.

But while the book provides an outstanding critique of past and present trends, it is less convincing about the future. Having made a good

case for higher education as an engine of national economic progress, despite the British experience) Professor Edwards devotes only a single chapter, admitted to be an afterthought, to his proposals for extending participation. They follow the expected lines of "the comprehensive university with maintenance grants to encourage more teenagers to go to university beyond 16."

Reasonably enough he calls for courses to be made more relevant to those of working class backgrounds, reversing the trend towards narrow specialisms, but practically no space is afforded to the new curriculum. There is little to suggest that the changes he recommends would have more than a relatively marginal effect.

As he admits, the extension of higher education on the scale advocated becomes more than a matter simply of educational change. It requires a revolution in social attitudes as well as educational opportunities. "And this means not merely restructuring education, but simultaneously restructuring the nature of work, employment, production and social organization in such a way as to regard higher education as a natural and valuable step, even a necessary one in the most recent period of technological and social change, it is an alien concept to the majority of the population. Those teenagers who have had no contact with graduates and no family tradition of even considering school education tend to be attracted to universities or polytechnics in special and unpredictable circumstances."

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*Higher Education for Everyone*, by E. G. Edwards, Spokesman University Paperback No. 36, price £4.95.

# Research explodes myth of German expertise

Social scientists at Liverpool Polytechnic have discovered that solutions to inner city problems drawn up for German cities will not necessarily work in Britain. Felicity Jones reports

It is not only the Social Science Research Council which has been under threat in the pursuit of vocational, wealth-producing lines of study. Inter-disciplinary social research is also under pressure to prove why it should continue to exist.

This is particularly so in the polytechnics where teaching and research have always been more directly linked to commercial and industrial needs. And it would seem from the utterances of Dr Christopher Ball, chairman of the board of the National Advisory Body for Local Authority Higher Education, that the limited provision for research is to become even more secondary in the polytechnics as they fight for scarce resources.

In spite of the restrictions upon polytechnic lecturers who have greater teaching commitments than their university colleagues, there is valuable research being undertaken. For example Liverpool's department of town and country planning is researching into the causes of and cures for inner city economic decline.

Liverpool has established close ties with Dortmund University's *Institut für Raumplanung* in West Germany. The towns are similar in that they have a declining economic base, traditional industries and rising unemployment.

The results of a long-term Ruhr-Mersey project, involving some 16 planners and social scientists in both countries, are to be published early next year. But the success of the interchange has been sealed with an agreement signed in February at a ceremony attended by Dr Gerald Bulmer, rector of the polytechnic and the pro-rector of Dortmund University, Professor Manfred Müller.

The project has thrown light on the success and failure of policies which have been tried in both areas to counteract the urban decline. This has been carried out by means of case studies and surveys in specific localities within each study region and lessons have been drawn from the results.

All the more ironic, therefore, that in a city such as Liverpool, recognized as having a severe inner city problem, a research team looking into these problems should only narrowly escape being axed in the latest round of cuts.

One of the findings of the research has been that to try and transpose German policies and institutions to this country, will not work.

This may seem a negative result, but there are many who believe that because West Germany is economically more successful all that is needed to put Britain to rights is to administer a large dose of whatever it is that Germany has.

In this context, supporters of the view have pointed to the large number of small firms and to the greater regional autonomy in Germany.

But this is a view which the Liverpool team, after close analysis view with some scepticism. Mr Ron Botham and Mr John Herson have both been studying the public authority responses to economic decline and conclude that the transference between the two countries has been made too superficially.

In Liverpool about 11 manufacturing firms employ about 50 per cent of the working people. But initiatives to bring small businesses into Merseyside have been a "minor palliative".

Although the local authority would credit that 1,000 jobs have been created through advanced factories, it is likely to be nearer 400, argue Botham and Herson, because a number of companies close down old premises to move into the new sites with their existing staff.

"We discovered that it is very difficult to make any meaningful comparisons between the two countries

to identify much of significance which could be transferred," said Ron Botham. "Certainly, there has been a great degree of responsiveness in Germany from central government to local needs with the possibility of more flexibility. But on the other hand, the system is more inflexible to changing national policy."

One curious aspect of this is that it was only in 1978 that unemployment was even included in the federal government's indices of deprivation. This is not to say that unemployment was not a problem but the bias in Germany is towards the rural areas and the border with the East, which means that the Ruhrgebiet gets a low weighting when it comes to governmental handouts and initiatives.

In terms of scale, Liverpool is much more experienced at coping through local initiatives with industrial decline and unemployment because it has been heir to the problems for longer. Merseyside's unemployment rate has consistently been double the national average since 1951 and it is now as high as 70 or 80 per cent in some parts. Dortmund's rate is nearer 10 per cent and is a relatively recent phenomenon.

The German retraining scheme, Botham and Herson argue, worked because there was a shortage of labour and full employment. But it would not transfer over here because the circumstances, namely high unemployment, are different.

Similarly, the much lauded "ordoliberalism" by which unions and management in Germany have agreed on job reductions in the face of closures has only appeared to work so well because there was no real problem for the redundant workers finding other work.

Botham and Herson believe that planning has to become much more the task of the whole of government, both local and central, in a system where investment planning is increasingly sophisticated.

The small environmental improvements which have taken place since the Toxteth riots have improved the city's attractiveness, they admit, but such small scale, macro-policies scarcely graze the surface of the problems of inner city decay without the backing of comprehensive government planning.

One myth which they contest as a result of the project is that there is too much state intervention in this country. In Germany they found that regional and central government, banks and craft bodies have been more involved and better informed for many years in innovation based regional policies geared to investment in new technology and products.

Their chambers of trade are far better informed and professional than their equivalents in this country. "They have therefore given much more help as a result from an informed basis because they know everything about their members' businesses and companies," pointed out John Herson.

Liverpool Polytechnic's town and country planning department runs a number of similar departments. At a time of no growth, it sees little point in training planners how to develop land in the traditional sense.

The emphasis instead is on giving planners the tools to stimulate growth; to understand more about the economic factors which can affect the success or not of schemes such as setting up enterprise zones.

So, it would be a shame if such a progressive approach to student teaching and research in urban planning were to be shelved without a backward glance at a time when such expertise is exactly what is needed if any serious attempt is to be made to revitalize the inner cities.

# Better ways to earn a living



Harry Styles: "I became rather disenchanted"

# Ngao Crequer finds out what life is like after voluntary redundancy

Aston University may have only one member of academic staff under the age of 30 by 1984, under present plans, and some engineering departments, may not have anyone aged under 45.

These are some of the grim statistics behind the current "restructuring" or running down of the university system. Aston one of the hardest hit universities, is being forced to let everyone go who wants to and this necessarily means that some of the brightest, best and youngest, who will find it easiest to find employment elsewhere, are leaving.

This month hundreds more academics will choose to retire prematurely from the system. But what kind of people are going, and what to, and what do they leave behind?

Dr John Collings, a senior lecturer at Aston's management centre has just left to become a senior consultant with Coopers and Lybrand Associates which pays more than his lecturership. He is 36 and began his lecturing career in 1972, at Hull. He has also served as economic adviser to the Department of Transport and the Treasury. Under the government's mobility scheme he will receive just under £20,000.

His faculty board decided that, to ease resource problems, courses with small numbers of students would not run. His main specialist course, on the interpretation of macroeconomic forecasts, came into that category.

"Out of six able young colleagues sharing my interest in the application of quantitative techniques, five have left in the last year. Only in one case is there any immediate prospect of a replacement being appointed."

"What made my mind up was the fifth person telling me the fact that they were not going to be replaced. It was a major factor is that you have a long way forward before you see any chance of my subject being built up again. At Aston we were faced with having to teach more and more the big non-specialist courses, and cutting out the interesting things."

As well as the job losing its satisfaction and seeing other good colleagues going, alternative employment easily available, at better pay, and the redundancy compensation meant that John Collings was able to move back into the London housing market.

His colleagues leaving include one who has gone to Bath University to a similar job, taking his compensation with him, another is going to work for the International Monetary Fund, a third is going to a research post in Sweden.

The cumulative effect of the cuts on job satisfaction also influenced professor Donald Duff to leave. Professor Duff, professor of applied geology at Strathclyde University has

been an academic for 28 years, eight of them at Strathclyde.

Now at the age of 55, he has gone to head the exploration side of North Sea oil for British Petroleum. He will be taking about £40,000 under the Government scheme. He had no problem finding another job.

"I am joining BP to look round the world for them for coal. They wanted someone with an academic background. I think if university life had not changed so dramatically in the past few years I would not have been so interested in going outside."

"We are having an incredibly difficult time to make ends meet in geology. You cannot train geologists without looking at rocks. That costs money. You have to take students out during the vacation, because you cannot take them away during term-time. Universities are loath to part with this money. You end up spending



John Collings: better pay

more of your time trying to get the money.

"With staff leaving and not being replaced, there is a minimum number below which you cannot run a decent degree. There has been about 18 months of continual hassle and

there has been no opportunity to pursue my trade. As long as academic life was something to enjoy, the salary did not interest me. "In my department three out of nine have elected to leave, and we are still arguing and fighting, but they are not being replaced."

"The university is in a very difficult spot. All universities are trying to avoid the possibility of making someone compulsorily redundant, so if it is suitable for someone to leave, that department will go downhill."

He said that in the past it was always possible to attract good people from industry but now with university salaries and cuts and more cuts, the system was under its greatest threat. "My criticism is that there really is no coherent attempt to unite departments from different universities to work together. We should be rationalizing," he said.

Harry Styles, aged 61, has just taken retirement from his job as University of London printer, on the academic-related establishment.

He has been with the university for nearly 17 years, having joined from IPC after starting his working life as a fine bookbinder craftsman. Now he intends to set up his own workshop and restore and repair violins and cellos as well as do some

freelance teaching and playing in bands. He has been attending evening classes on the restoration of musical instruments for some time, with his new career in view. He takes with him £4,000 a year pension plus a lump sum of £13,000.

"I was originally going to retire at 65 but in the last two years I thought about going earlier. The interest had gone out of the job."

"Until three years ago things were still developing but now it is very depressing. All you see are cutbacks and cessation of all the interesting work. I became rather disenchanted. But it would have been more difficult to do without the four years (enhancement of pension) given by the university."

Professor Margaret Donaldson, of Edinburgh University is one of those taking up the opportunity to continue to work part time. She will be reengaged for one fifth of her present time to carry out teaching. The rest of the time she will give up to her own research.

She was given a personal chair in developmental psychology two years ago and has spent most of her academic career at Edinburgh. She is 56.



Margaret Donaldson: "Sensible thing"

"I like research and, for me, going is no real hardship. If I was going to be completely cut off, I would be devastated to do it, but as it is it is a better redistribution of my time. I have the freedom to do my research (into children's thinking and language) and I can keep links with the university."

"I did weigh with me that it seems to be a question of some people taking early retirement and others being kicked out. So it looked like a sensible thing for me to do. When people are urging those to go who can do so without personal hardship, this must be considered", she said.

Another person leaving because he "was asked to" is Professor Sir Brian Pippard, Cavendish professor of physics at the University of Cambridge. "I have been in Cambridge all my life and feel a great loyalty to the university. But I am going because there was a general request to everyone over 60. An acknowledged leader in his field Professor Pippard is an authority on the behaviour of electrons in metals. He is at the Cavendish Laboratory, Cambridge."

"I shall carry on more or less as before. For some years my major effort has been a monumental treatise on vibrations, which will take several years more to complete. I shall keep a room in the laboratory and remain a fellow at my college."

"I shall regret not having so much involvement with teaching but by and large I am quite indifferent. But I do regret that universities have brought this on their heads. They have been desperately in need of reform but have sedulously refused to do anything about it."

"They ought to think what their social role is, to be useful citizens. We still insist on being elitist institutions with every given right to dunder research and teach students what we think is good for them."

"I am not suggesting enormous changes but we ought to evolve so that people respect us. Universities have no friends in the country and it is their own fault," he said.

Doubtless some lecturers are going who are glad of the opportunity to retire early with a golden handshake. "But many have become dissatisfied with the job, the intellectual challenge being replaced by cuts wrangling. The only way to restore morale would be to bring new people in."

# David Jobbins reports from the TUC conference in Brighton Working towards a fairer system

struggle between left and right within the TUC.

But the debate never rekindled the fire of last year's congress in Blackpool, when the mineworkers pledged their powerful muscles to the teachers' cause.

The heart of the resolution had been drafted in an earlier motion submitted by the Association of University Teachers. This also instructed the TUC general council to ensure that the next Labour Party manifesto contained firm pledges on the restoration and improvement of provision at all levels.

The first step towards bringing TUC and Labour Party policy into line was taken just a few moments later when a call from the National Association of Teachers in Further and Higher Education for a legal right to a year's paid educational leave for all over 19 was endorsed by the congress. A similar proposal is certain to be adopted by the Labour Party in its "Programme '82" at its own conference in Blackpool.

The TUC took the opportunity to take a sideswipe at the growing tendency to force adult education on to a self-financing basis. Creeping privatization which echoed similar trends in other local and national government services was also roundly condemned during the week.

The underlying themes of the TUC were the plight of the low paid and the curse of seemingly ever-rising unemployment particularly among school leavers.

Incoming AUT president Mr Steve Kuhemann told delegates how the denial of university places to 44,000 young people over the years 1981/84 would inevitably set in train a chain of deprivation which would push as many more young people on to the streets without any educational opportunity.

At a Fabian Society fringe meeting Labour education spokesman Mr

Neil Kinnock outlined a problem for education more entrenched than the social effects of Thatcherism and Reaganism.

Unless new and modern employment and education policies were adopted the next Labour Government's job-producing relations policies could well be neutralized, he warned.

"The objective of full employment could not be achieved just by creating a demand for workers," he argued. "We need also to decrease the supply of workers, either by decreasing the amount of time in a year, a week, a day that people attend work, or by decreasing the number of years we attend work, or a rational combination of both."

The education system must permit easy access to facilities for continuous learning to keep pace with the new technologies, while a new "leisure education" had to be developed to fill the non-material rewards previously derived from work and the companionship of the workplace, he said.

He admitted that the cost even of the party's proposals for 16-19 education were vast - £2,000m at 1980 prices.

But the consequences of not adopting the proposals for the education system were not "genetec decay, but a new helix of mass unemployment, involuntary and unprepared abolition of working life at 50, the denial of hope for the young, the complete neglect of minorities who have neither the numerical or organizational strength to claim a share of the dwindling work."

Both the AUT and Natfhe were among the few smaller unions who followed the general council line and voted for the status quo on the body. In doing so they were on the losing side, but just a few hours after

members of both delegations were speaking of the possibilities of a loose federation between the two unions aimed at meeting the 100,000 member qualifying factor for an automatic seat on the general council. A deal is still a long way off but membership added together comfortably exceeded the barrier.

It was being suggested that if the only aim of the arrangement was to qualify for an automatic seat, it would not be necessary to ballot the membership first - something which many members of both unions might question.

A litmus test for the teacher unions this year has been their attitude on peace and disarmament. None of the other teacher unions affiliated to the TUC has gone as far as Natfhe in voting to affiliate at national level to the Campaign for Nuclear Disarmament. Only the AUT has come close to Natfhe's position but has so far balked at CND affiliation.

At Brighton, the National Union of Teachers delegation had decided to abstain, which left it in the company of arch rivals the National Association of Schoolmasters/Union of Women Teachers and a handful of other "non-aligned" unions.

Both Natfhe and the AUT were supported the majority of delegates who supported a call for the cancellation of Cruise and Trident, removal of all nuclear bases from British soil and waters, and creation of a nuclear-free zone in Europe.

But the overriding preoccupation of the week was the National Health Service dispute and its relevance to other low-paid workers and for the next round of salary negotiations.

Delegates rejected cash limits as a "divisive and inequitable" form of incomes policy for the public sector. They called on the general council to build on the coordinated approach adopted by public sector unions this year for the 1982/83 round - this

time with a special emphasis on low pay. They also put talks with the Labour Party on a £90 a week minimum wage for adult workers on the agenda.

Mr Rodney Bickerstaffe, the new general secretary of the National Union of Public Employees, formerly manual workers, later confirmed he had the vice chancellors in mind when he attacked certain employers for their attitude to the low paid.

"I feel anger that within the last two years I have been told by employers on the other side of the table that my people cannot have £60 as a minimum for a full working week while the employers on the other side were on £32,000 a year, £600 a week, £120 a day, £60 a morning," he said.

The congress also called for urgent steps to increase the level of participation by women in union activities and a TUC-sponsored day of action to highlight how it could be done.

Ms Tricia Leman, a member of the Natfhe executive and of the TUC women's advisory panel, welcomed what progress had been made but warned: "If you put the measures we have taken so far against the unprecedented and savage attacks this Government is now making on women and ask if the progress on equality in the movement is sufficient or adequate the answer must surely be no."

She told her overwhelmingly male audience: "We are not too many are organized and organizing and you ignore us as your penit."

For Mr Laurie Sapper, retiring general secretary of the AUT, it was his last annual congress. He spoke briefly during the education debate, underlining as ever the contribution the universities could make. His successor may in a year's time have the opportunity to make a similar assessment. For he or she, however, the task of persuading the big boys of the union movement that higher education is more than a luxury will be easier thanks to the efforts of Mr Sapper and others like him.



## Studying outside the red brick wall

John Sassoon looks at the London University external system which is expanding to meet fresh challenges

The London University system of external qualifications was founded nearly 150 years ago. This system not only lives on but is now expanding and developing in order to meet new challenges, both of financial stringency. It can and does fill a need which no other agency can fully satisfy.

We know that there is a continuing demand for part-time, home-based study at degree level, which shows no sign of diminishing. Present policies are likely to increase this demand. The cuts in the number of new university and polytechnic places seem likely to result in a smaller proportion of the age group being allowed to participate.

Moreover, if the proportion of the age group entering A level courses remains unchanged, then an actually expanding reservoir of potential mature degree students will be created both able and qualified to undertake degree courses - but excluded from them. At the same time, redundancies and early retirements among academic staff mean that for many years there will be experienced university teachers no longer in universities - a pool of expertise available to help in the crisis.

Flexibility comes from the fact that the London external system is an examining not a teaching body. The university lays down, for instance, minimum entrance qualifications for each degree, the fees (regrettably going up), a minimum period of study (usually five years), the syllabus and the examination. It says nothing at present about course or method of study, though it has done so in special cases in the past and may do so again. In most subjects the students are free to decide for themselves how they will learn or be taught.

Of the 9,400 external first degree and diploma students in the UK last year, 4,400 (46 per cent) were taking correspondence courses, 1,500 (16 per cent) were taking part-time, mostly evening classes, just over 1,000 (11 per cent) were taking full-time courses in independent colleges, and nearly 2,400 (25 per cent) were studying by "other methods".

Whatever their main method of study may be, all are welcome to apply for one or more of the "vacation courses" that university extramural departments provide for them. The vacation courses are provided by universities outside London as well. They vary from two day seminars, to a series of linked weekends or a full residential week.

One reason why people today are less aware of the London external system is that surveys of the higher education scene scarcely mention it. One example is the excellent Advisory Council for Adult and Continuing Education report *Continuing Education: from policies to practice* published earlier this year.

The reason is not oversight - it is more fundamental. These surveys appear to be based on the institutions including correspondence colleges through which "continuing education" students are taught. London University external students may thus find themselves classified as being in further education (advanced or non-advanced), in part-time or evening polytechnic classes, as studying by correspondence, or perhaps as vocational or non-vocational. But they will mostly look in vain for a mention of their status as London University external students which sets the content, the standard and the immediate objectives of their learning.

We know that many external degree students, perhaps as many as 2,000, are studying privately with few



Some students go on vacation courses

and apart from books. A simple classification by the kind of institution in which a course may be held or by the kind of course being followed omits these private study students altogether. This understates the volume of continuing education being undertaken. The private study students may not be a high proportion of those in continuing education but they are pursuing a defined objective by planned, purposeful study the private students are not unimportant and may be more numerous than we think.

More disturbing than the bare omission of private study from the list of recognized methods of education is the concept of education which this omission implies. This is a concept that education is something that has to be given or taught and that what may be learned or acquired by students through their own effort cannot properly be described as education. Few would belittle the value of teaching or the formative influence of personal contact with a mind more perceptive and sensitive than one's own. But to suggest that learning or intellectual growth cannot properly take place without these advantages is to deny, for a start, the educational impact of literature or of orderly study as an activity. The University of London external system affirms the value and validity of self-acquired knowledge. It extends, particularly to those whose commitments preclude the use of conventional means, a route to high and specialized learning. This can be followed if they have access to books and sometimes certain other material and if they are possessed of the qualities of intelligence, determination and an almost obstinate persistence.

The London external system appeals particularly to those who want (or need) to study a particular subject in depth. The subjects offered at first degree level include in the arts faculty 23 languages and literatures ranging from Sanskrit to English and most European languages, also history, geography and philosophy. In other faculties there are degrees in divinity, law (our most popular degree), economics, and music.

There were nearly 1,700 new registrations in the UK during 1981-82 for first degrees and diplomas and a total of nearly 9,400 external students registered for first degrees or diplomas. In addition there were over 8,500 registered for first degrees and diplomas overseas, mainly but not exclusively, in the Commonwealth. It is used to be said that the Commonwealth was a club for former London University external students. We do not know of it and many Commonwealth Prime Ministers are former external students, but there is at least one (and at least one economic adviser to a Prime Minister).

Just over 900 external students are registered for higher degrees. In 1981 (the latest year for which figures are available) the university awarded 592 degrees to external students of whom 384 were in the UK. Of these, 52 were higher degrees.

The founding of the Council for National Academic Awards in 1964

## The need to exercise our critical faculties

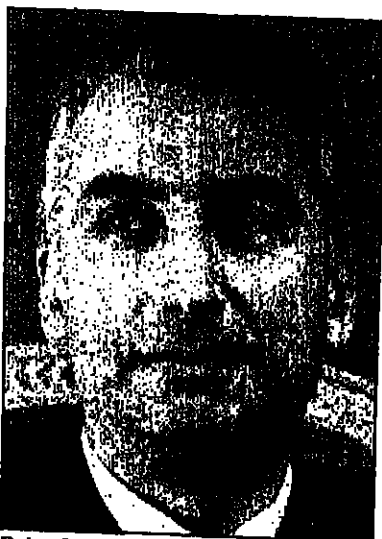
Margaret Coleman argues that literature students should be taught more about literary theory and critical strategy

In the late sixties, a red brick wall in my university town bore the slogan "Paris today, Leeds tomorrow". Looking back, that rather naive yet nonetheless pungent slogan seems not just to encapsulate the political aspirations of that generation of students. It also represented the excitement of those students in the English school who had just discovered the work of Roland Barthes, Lucien Goldmann and Georg Lukacs, all recently published in English and offering a new European theoretical perspective on the study of literature.

Nearly 15 years later, the students of 1968, many of whom are now teachers of literary studies, appear to have failed in introducing either the spirit or substance of their discovery into the undergraduate curricula of their successors.

Many teachers of literature who have been engaged in developing undergraduate programmes which include components of literary theory, or allow for the examination of contrasting critical strategies and approaches, have met considerable scepticism and reluctance on the part of colleagues and external validating bodies to admit the validity of such courses. They argue students should be studying the literature itself, not how and why we study it.

There also appears to be a view prevalent even among those who feel the need to introduce theoretical and methodological issues into the undergraduate programme that the material is just too difficult. Such views manifest a deal of defeatism, some of which may be justified since there are problems not only of how to handle theory at an appropriate level but also of actually finding readily accessible and reasonably priced texts for an undergraduate population.



Roland Barthes: literary theorist

My own experience of teaching literary theory to undergraduates since 1978 has convinced me that the use of short extracts of complex theoretical writing to provide a focus for consideration of literary problems-solving ensures a reasonable grasp of difficult ideas from which individual students can develop according to ability and inclination.

Sadly, most contemporary theory is published in costly, lengthy monographs which are prohibitively expensive and pedagogically overbearing for use with students. Useful collections which did exist such as *Sociology of Literature and Drama*, in the Penguin Education series, and the English Association papers *Contemporary Approaches to English Studies*, went quickly out of print. Would-be teachers of theory are caught in a vicious circle. To develop courses, we need appropriate texts but because there are few courses, there is no market for such texts. Therefore, the texts are not published.

Apart from these mechanical difficulties, however, is the conceptual difficulty of literary theory too great an obstacle in itself? The assumption on the part of a teacher that students lack the capacity to understand such high-flown matters is reprehensible.

It might more properly be attributed to a professional obscurantism on the part of academic teachers eager to preserve a territory intact.

In my view students often breathe a sigh of relief at an opportunity to discuss work literature may be described and approached by theorists, critics, teachers and not least themselves, since in many cases it has been the object and end of their studies for three years. A consideration of the ideological and methodological implications of their own critical strategy is a legitimate activity if we are to encourage students to regard their study of literature seriously.

Surely a commitment to study literature for a number of years ought not to be made lightly. Therefore, questions such as what is this thing we are studying, what are we doing when we study it, and how does it relate to other cultural phenomena (in other words theoretical questions) are paramount.

The problem for students who lack access to the discussion of such questions is that they are thereby denied access to a consideration of the validity of different theoretical approaches and critical strategies and the attendant skills and practices. Without such overt consideration in the form of critical and analytical skills (and I have in mind particularly those which may be introduced through language awareness and basic stylistics) the student may have few skills with which to work with the text and from which to develop an understanding of the activity in which he or she is engaging.

By introducing a range of critical skills and strategies and ultimately linking them to their related theoretical positions, we, as teachers, can demystify the study of literature and make it available to students with a wide range of abilities and attitudes. To leave these things unstated or considered must result in a continued practice of assessing students' level of understanding in accordance with their capacity to demonstrate implicit and therefore, mystical codes to which they either become initiated or fail.

Further, the result of leaving expectations about the scope and aim of the study of literature implicit is not necessarily to be liberal and accommodating to all views since we regularly use categories such as "fact", "discretion", "sensitivity" and "personal engagement" with the text to assess students' progress without explicitly specifying the basis on which those categories rest.

The very vocabulary suggests that moral rather than intellectual qualities are under scrutiny and that what is being measured is students' "fitness" to respond to the text. Inviting as it may seem, the "personal response" view does not allow freedom of the individual but, on the contrary, may lead to an intuited aping of the standards set by the academic hegemony. Thus myths about sensitivity, taste and decorum are perpetuated.

A more serious consequence, it seems to me, is that students who lack that "innate" knowledge, whose class ethnic background and gender does not lead naturally and inevitably to the confident expression and application of such values, are at an immediate disadvantage.

We are in danger of perpetuating not simply intellectual myths but also social and cultural ones about the qualities necessary for success in literary courses.

Openness in the introduction of critical skills and strategies and their theoretical starting points cannot alone change an entrenched system. But it can encourage consideration of the aims and scope of literary study so that as students and teachers of literature we can arrive at informed conclusions about the nature and purpose of our activities.

## Laying bare the beginnings of the atomic age



Oppenheimer discusses plans with Major General Leslie R. Groves

People around the world are intensely concerned with the fundamental questions of the atomic age. Throughout Europe and in the United States nuclear power has been debated back and forth, and a number of American plants have been discontinued or closed down. Proposals for a nuclear freeze have dominated the weapons debate around the globe.

And recently, in the midst of such ferment in the United States, the superb BBC series about J. Robert Oppenheimer finally came to an end. Oppenheimer was the scientist in charge of the massive effort to create an atomic bomb during the war. And the story of his life - its triumphs and its tragedies - opens once again many of the questions about how atomic weapons first came to be used.

The television series was successful in developing the background work that was essential before the Manhattan Project - the wartime effort to construct the atomic bomb - could get off the ground. Nuclear weapons were unimaginable until there was a basic knowledge of atomic particles and how they behaved. Scientists in Germany in 1938 were the first to discover that uranium, when bombarded with other particles, could be split into separate parts. And thanks to Albert Einstein's earlier assertion that matter and energy were part of the same phenomenon, observers of the early experiments understood that a tremendous source of energy was available, if only it could be brought under control.

The United States became involved when Einstein wrote a letter, delivered after the war in Europe had begun, to President Franklin D. Roosevelt. In his message Einstein observed that "it is conceivable that extremely powerful bombs of a new type may be constructed," and he hinted that the Germans were interested in the possibility too. Roosevelt responded by forming a committee to look into the matter, and thus began the major scientific effort of the war.

After several bureaucratic reorganizations, the Manhattan Project came into its own. Over three years it cost \$2 billion (then a huge sum of money), and included the construction and use of 37 installations in 19 states and Canada. The task involved much of America's scientific and engineering talent, drew upon similar talent from Britain, and employed Niels Bohr. He hoped desperately that atomic energy could be used for the benefit, and not the destruction, of humanity, and he believed that the bombs under development demanded the creation of a new international order. He felt further that union was only possible if the Soviet Union was involved in post-war atomic planning, before the war came to an end. Bohr approached Stalin to persuade them to inform Stalin of what was going on, but they had little interest in what he had to say. They were more concerned with preserving the potential bomb as an instrument for their own diplomatic ends.

Then in April 1945 Franklin Roosevelt died. With the war, it

Allan Winkler discusses America's wartime efforts to produce the atom bomb and questions why it was dropped on Japan



A ruined cinema stands above the flattened remains of Hiroshima

Europe almost over, with the war in the Pacific still going on, and with the first atomic bomb almost ready, the new president, Harry S. Truman, would be the one to decide how it might be used.

Truman had known little about the bomb before he assumed the presidency. But now he was informed about the whole process of development, and about the hearing the bomb might have on relations with the Soviet Union, which were then deteriorating all too fast. Secretary of War Henry L. Stimson suggested the formation of a special group to advise on questions surrounding the bomb, and the Interim Committee was the result.

That body met several times and reviewed the background of the project. Aware of the crisis involved, convinced that the bomb was a legitimate weapon of war, the committee recommended that the bomb be used without warning on Japan. There was some discussion of a non-military demonstration, but that suggestion was rejected on the grounds that it might be a flop. Later, when some scientists began to argue that a surprise attack against Japan would be inadvisable, for it could easily precipitate a real arms race, the Interim Committee responded to a small degree. It accepted a proposal from the Scientific Panel, of which Oppenheimer was a part, that the allies of the United States be informed before the weapon was used.

But that was all. While Truman, Churchill and Stalin met together at Potsdam in July 1945, American scientists finally tested their bomb for the first time at Alamogordo, in the New Mexico desert. It was a stunning success. The crash broke windows 125 miles away. A blind woman saw the light. At the conference Truman was clearly exhilarated and became more assertive in his dealings with the others. Taking lightly the Interim Committee's suggestion that the Russians be informed, he "casually mentioned" that he had a new weapon of unusual destructive force. But for that offhand comment, the secret remained intact.

Very soon thereafter the bombs were dropped on Hiroshima and Nagasaki. Tens of thousands of people were killed or maimed beyond belief. In each case they faced heat close to the temperature of the surface of the sun. The Japanese, convinced of the hopelessness of their cause, quickly accepted terms and signed an agreement bringing the war to an end.

In all of this, the real question, and one which the BBC series only partially addressed, is: Why were the bombs used at all? Japan was close to surrender, and, having broken its own code, the United States was clearly aware of that fact. The crucial point seemed to be the matter of the Emperor. Would he be allowed to remain on his throne, or would the institution be abolished? Some Americans were willing to allow him to stay, but in the end a stubborn commitment to the policy of unconditional surrender, announced earlier in the war, kept them from making

any concessions until the war had actually come to an end. Why was an invasion not tried instead? A military attack had long been planned, and the American armed forces were ready to move. The island-hopping campaign in the Pacific had been overwhelmingly successful, and American troops were getting closer and closer to the mainland of Japan. The Army was confident of victory. The only sticking point was an uneasiness over the number of casualties that would be suffered in a long and extended campaign. The Japanese had been fighting tenaciously for their Emperor and their homeland, and there was every reason to believe that they would continue to do so, even with their backs against the wall.

Why were the Russians not urged more strongly to enter the Pacific war? At the Yalta Conference earlier the Soviet Union had agreed, in response to American requests, to join the campaign in a matter of months, and it appeared that Soviet involvement might persuade the Japanese to cease to fight. But, as much as they had earlier sought Soviet help, Truman and his advisers were now less than eager to have the Russians involved in the area. Such involvement, after most of the fighting was done, could then give the Soviets a lever in requesting land or other concessions, as they had been doing to American dismay in Eastern Europe in the course of the past year.

In the aftermath of war, policy makers who were involved justified their decisions to use the bomb on the grounds of military necessity and the need to spare American lives. Secretary of War Stimson made just such a case in an article in *Harper's* magazine in February 1947 and in his memoirs, *On Active Service in Peace & War*. The first generation of historians concerned with the issue accepted that argument and used it as the major account of the end of the war. Later, revisionist scholars began to argue that the bomb was used to terrify the Russians and make them easier to handle in post-war affairs. Such a military demonstration, the argument went, would show them the overwhelming power of the United States. *Car Alperovitz*, in *Atomic Diplomacy: Hiroshima and Potsdam*, published in 1965, pushed that point hardest and changed the whole tenor of discussion about the first use of the bomb.

Both versions had a measure of merit. But the most important reason the bomb was dropped, as more recent scholarship has demonstrated, was the fact that no policy makers seriously considered not using the weapon. Barton J. Bernstein, in a measure of articles, and Martin J. Sherwin, in *A World Destroyed: The Atomic Bomb and the Grand Alliance*, have, in the past few years, examined the motivations and assumptions of those in charge of crucial wartime decisions with telling results. Policy makers assumed the wartime use of the bomb from the start, and though it was initially intended for Germany, the European war was over and the Pacific war was still

going on. Franklin Roosevelt, a popular president elected four times, had certainly worked on the assumption that the bomb, when ready, would be employed. Uninformed and unsure of himself, president only because of his predecessor's death, Truman was simply not prepared to overturn a decision made, in reality, when the expensive process of development was begun.

The decision, then, in some ways was a non-decision. The new weapon was used, just as other weapons, old and new, were used to try to end the war as quickly as possible. It did serve to minimize the Soviet declaration of war, when it came, and thereby to deprive the Russians of any post-war role in Japan. It also must have impressed the Russians, as the Americans hoped it would, important as those factors were, though, they were not the primary ones. They reinforced, but did not control, the ultimate decision that had already been made.

In the end the United States simply used the weapon it had long planned to unleash. In some ways, people were so numbed by the war that the new bomb seemed no different than conventional bombs, which in large enough quantities could deliver the same destruction. But the atomic bomb did begin an arms race, as some advisers had well understood it would. A new force was unleashed, and the world would never be the same.

The Oppenheimer series provided a good introduction to the scientific and military questions involved. But the issues go beyond those shown in the dramatic episodes on the screen. Atomic questions provoke a morbid fascination on the part of the public at large. Concern has surfaced in the past, and has begun to surface again. And well it might - for the real message of the first use of the atomic bomb is that the weapon was used because it was made to be used and was ready when the time came.

Today, four decades later, with infinitely more firepower ready to explode, the arms race feared did occur, and has almost become a fact of life. Fears reached intense levels in the 1950s when the Committee for a Sane Nuclear Policy and other groups protested the tests that were going on. But interest then subsided and remained relatively dormant until recent months.

Now the same fears, very real indeed and grounded in proven fact, have once again emerged. And with those fears there has come a revival of the interest in the world's atomic past. The Oppenheimer series, so well done and well received, is a measure of such concern, and provides substance for reflection once more on the ethical and moral questions that are unavoidable in our atomic age. If bombs can be used easily in one war, why might they not be used again? And, given that question, what must we do to ensure that such an eventuality will not occur?

Policy makers assumed the wartime use of the bomb from the start, and though it was initially intended for Germany, the European war was over and the Pacific war was still

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## BOOKS

## The training of a Foreign Secretary

by John Prest

Palmerston: the early years 1784-1841

by Kenneth Bourne  
Allen Lane, £25.00  
ISBN 0 7139 1083 6

Palmerston has not gone short of biographers, and Kenneth Bourne himself picks out H. C. F. Bell's as the best of the two-volume lives, and Donald Southgate's as the best of the one-volume ones. But neither Bell nor Southgate had access to the family papers at Broadlands, and the importance of this enlarged study lies in the manner in which Bourne has been able to supplement and correct both their work and Sir Charles Webster's celebrated and enduring account of Palmerston's foreign policy by reference to the Temple's personal papers.

Bourne never spells out exactly what these consist of, but they have proved sufficient to justify him in planning his new enterprise upon the most expensive scale. The text of this first volume runs to close on 350,000 words, and the completed work might quite possibly top the million. One can hear editors pleading for less, and it is scarcely surprising that the book has apparently been obliged to travel a long road to publication (the preface is dated March 1977), and that compromises have been forced on the author en route. The print is small and the pages large (not Allen Lane's best format), and the footnotes are delivered, one at the end of each paragraph, in cluster bombs, which maintain indiscriminately and make identification difficult.

Do not be put off. This is a major work, and the range and depth of Bourne's researches into Palmerston's connections is astonishing. Palmerston's private papers tell us much about both his fortune and his love life, and the way in which he provided out of the fruits of the other, and it will be as well to turn to those aspects first.

Palmerston was born in 1784, and when his father died in 1802 he inherited "fine houses in Hanover Square, Sheen and Broadlands, large estates in Dublin, Sligo, Hampshire and Yorkshire, and a considerable amount of stock". Of course there were liabilities, and allowances to be made to his brother William, and his sisters Frances and Elizabeth. But when Palmerston came of age in 1805 his net income from all sources (sufficient to support about four hundred farm labourers), and after his father's executors had finally discharged their responsibilities in 1811, it was, with the addition of income from stock and his official salary, £14,356 (which would have purchased about the same number of poor curates).

Palmerston was never content to rest where he stood. Throughout his life he was an active landowner. His papers are full of schemes to buy up neighbouring farms (often at exorbitant prices) and consolidate his holdings. He planned great schemes of improvement, many of which revolved round the exploitation of minerals, and borrowed money heavily, and sometimes rashly, in order to carry them out. In the management of his estates, as in his mature political career, he took risks, made mistakes, and lived to see everything work out in his favour in the end.

He was attracted to women ("The Ruling Passion" Bourne calls it in a chapter heading) at about the same time that he came into office in 1807. In 1809 he and Lady Emily Cowper became lovers. In 1810 Minny was born; in 1811 William Francis (even the indulgent Lord Cowper thought twice in two years was a bit tiresome), and in 1820 Frances Elizabeth (paternity more doubtful). But Palmerston was no more faithful to Lady



Lord and Lady Palmerston.

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Emily than she was to him. In 1814 he took up with Emma Murray (Mrs Mills), who was alleged to have been the daughter of a publican in Hereford, and a son, Henry John Temple Murray, was born in 1816. No other liaison is known to have produced a child, but the tally remains uncertain. No colleague's neglected wife or pretty daughter, Bourne thinks, was safe from his attentions, and his tastes were catholic enough to extend all the way down the social scale, in this volume, from Lady Jersey to Mrs Brown.

Throughout this period Palmerston kept a scorecard in his diaries, which were filled with "double entendres and shorthand Italian", and pages from his diaries for 1819 and 1835 are among the many excellent illustrations in this book. Palmerston recorded assignments as "visits", and conquests as "sera", or as "fine days" and "nights". He was proud of his appetite and strength, and placed an emphatic figure "5" on the entries, while on other occasions, with characteristic honesty, he noted that he had failed.

Palmerston appears to have viewed the consequences of his adventures with honourable and jaunty good nature. Even the most casual affairs led to begging letters, and his more serious relationships ended in his accepting responsibility for the welfare of his mistresses and of his children. These debts of honour were discharged about equal terms out of his own resources and through his power to make appointments to the public service. Thus "La Whaley" received £827 in 1819, and Eliza Blackburn was rewarded with a place in the Foreign Office for her eldest son, Minny, his favourite child, and her husband, Lord Shaftesbury, were showered with gifts and loans amounting to tens of thousands (as Geoffrey Finlayson's life of Shaftesbury has already made clear), and William was acknowledged as Palmerston's heir, while Mrs Mills was supported successively in Pall Mall, 122 Piccadilly, Birkbeck Lodge in Berkshire, and Bulkeley House at Englefield Green in Surrey. As for Henry John Temple, he was educated at his father's expense, and sent to Sandhurst, and then, when he threw that up, taken into the Foreign Office (Bourne's researches revealing, in these and other instances, the substantial truth of Bright's assertion that the public offices formed a gigantic system of outdoor relief for the [bastard] children of [royalty and aristocracy]).

With Palmerston's private life now finally rescued from surmise, Bourne has proceeded to reinterpret Palmerston's whole career. The new portrait

begins with a surprise. Nobody, we are told, could have foreseen in the docile, earnest and rather priggish child, and in the curiously unreluctant teenager, the future gladiator of foreign affairs and the master of domestic politics. At 16 Palmerston was distinguished by lack of zest. Upon being offered office for the first time, he opted for a "lesser degree of risk", and asked, without affectation, for a post in which "I was still reserved and cautious, and it might be hoped not to fail". At 26 he was still reserved and cautious, and it is praiseworthy that he would afterwards, where greater talents might swim, he was not born then, with the taste of combat, the burning ambition to triumph, and the dazzling talent for insubordination, which were to become the hall-marks of his career. It was in pursuing women through their gardens to their husbands' beds (this does seem to have been an inherited characteristic) that he learned to love danger, live on the brink of disaster, and to trust to his wit and his generosity to find a way out of scrapes and to confront the consequences. It was not, perhaps, by itself, an ideal training for a Foreign Secretary, but then it was not the only form of training Palmerston received.

Bourne lays more emphasis than have Palmerston's previous biographers upon the formative nature of his experience at the War Office. Palmerston went into the office, in 1809, a rather timid bureaucrat. In and Eliza Blackburn was rewarded with a place in the Foreign Office for her eldest son, Minny, his favourite child, and her husband, Lord Shaftesbury, were showered with gifts and loans amounting to tens of thousands (as Geoffrey Finlayson's life of Shaftesbury has already made clear), and William was acknowledged as Palmerston's heir, while Mrs Mills was supported successively in Pall Mall, 122 Piccadilly, Birkbeck Lodge in Berkshire, and Bulkeley House at Englefield Green in Surrey. As for Henry John Temple, he was educated at his father's expense, and sent to Sandhurst, and then, when he threw that up, taken into the Foreign Office (Bourne's researches revealing, in these and other instances, the substantial truth of Bright's assertion that the public offices formed a gigantic system of outdoor relief for the [bastard] children of [royalty and aristocracy]).

Even so it was in this early apprenticeship, towards the end of his long career nearly came unstuck. In 1826, when he was locked in conflict with the Crown and the Commander-in-Chief, Emily suddenly became difficult and Emma resorted to blackmail. Palmerston reacted, as he always did, by treating the refusal of one woman as a license to experiment with others. Getting too little rest, as Bourne puts it, "morning, noon or night", Palmerston, for the first time in his life, discovered that

not even his frame could support all work and all play. His investments in Peco-Peruvian and other stocks collapsed. His shares in Welsh slate, ultimately so profitable, made calls on his resources, large as to jeopardize his plans to improve his estates. Faced with this combination of pressures, Palmerston displayed petulance with his subordinates in the office, and flippant in his answers to the House of Commons. If ever his career was going to end in shipwreck, it was then, and when it could be seen that he had survived, he was virtually unassailable.

By the time he came to the Foreign Office (over the head of Lord Holland) in 1830, he had learned how to blend the recklessness and success of the lover with the professional mastery of a man who had already spent three hours at his desk every morning before his critics were astir. Having then in this first volume of Bourne's study, escaped the control by Grey and Melbourne, he is not going, in the next, to submit to restraint from either Lord John Russell (his junior in office by over twenty years) or Prince Albert.

With the Palmerston of the 1830s we find ourselves on more familiar ground, though even here Bourne takes a delightful touch when he takes a leaf out of Lord David Cecil's *Melbourne*, and portrays Palmerston as having fallen in love with the young Queen Victoria, and suggests that the feeling was reciprocated.

In recounting Palmerston's conduct of the Belgian and Near Eastern negotiations, Bourne's account runs closely parallel with that of Sir Charles Webster, but with much more attention paid to the connexion between foreign affairs and home policy. It is in these chapters that we come to see how the Tory turned Whig, and how the Whigs, True, at all general plans for reform. But from his platform at the Foreign Office he is able, with genuine conviction, to heap upon the heads of foreign governments lecture after lecture based upon the best Whig, and even Liberal sentiments of the day. "It is the character and purpose of human nature", he writes, "that all societies should be constantly altering. There was, in nature, 'no moving power but mind'".

All over Europe a great contest was being waged between "arbitrary constitutional government on the one hand and other", and between two great parsons, one of which endeavours to bear sway by the force of public opinion; another, which endeavours

to bear sway by the force of physical control". But the Metternichian system of repression could not last; nobody could continue for ever "measuring the columns" of the newspapers, and "prohibiting any books that anybody would wish to read". Those who sought "to crush opinions, and to prohibit the human race from thinking" would fail, and the revolution of 1830 was to be welcomed as ushering in "the ascendancy of Liberal principles throughout Europe". No violence had been committed "beyond what was absolutely necessary for the security of the constitution". Was not this "the most triumphant demonstration of the advantages arising from free discussion, from the liberty of the Press, from the diffusion of knowledge, and from familiarizing even the lowest classes with the daily examination of political questions?"

It was therefore in Britain's interest to favour the extension of the principles of constitutional freedom all over Europe. Until that happened, British diplomats, residing abroad should be brought home regularly to "refresh themselves by vivifying their English feelings, and witnessing more closely the operation of those constitutional doctrines in which they have been brought up". These doctrines were that constitutional governments were less likely to go to war than despotic ones, because when taxes had to be voted they would not be voted lightly; that it was impossible, without a constitution, fully to develop the resources of a country; and that free trade among nations would bring both material and moral benefits, "leading civilization with one hand, and peace with the other, to render mankind happier, wiser, better". All these and other passages which Bourne quotes approvingly remind one of sentiments expressed a decade, and some times more than a decade later, by Macaulay, Cobden and Gladstone. Palmerston's liberalism may have been brewed for export only, but it was manufactured neither weak nor late.

Final judgment upon Bourne's achievement must await the publication of the whole work. At the end of this first volume, Palmerston, now at last (1839) married to Lady Emily Cowper, goes in for the interval with the score in diplomacy standing at France 0 England 2. Palmerston is in a strong position, but he has no party, he is hated by the staff at the Foreign Office, and he is, apparently, those to whom he is most intimately related, and he is still capable of absurdity, particularly when he talks about the dangers of lightning raids by French steamships upon the South Coast. But he has already become in some way (like Machiavelli in political theory) larger than other men, a person to whom rules do not apply, and when his final term at the Foreign Office, from 1846 to 1851, turns out to be conspicuously unsuccessful (France 1), he will still manage, thanks to the Criméan War, to take over the leadership of the Liberal Party. Bourne comes to see how the Tory turned Whig, and how the Whigs, True, at all general plans for reform. But from his platform at the Foreign Office he is able, with genuine conviction, to heap upon the heads of foreign governments lecture after lecture based upon the best Whig, and even Liberal sentiments of the day. "It is the character and purpose of human nature", he writes, "that all societies should be constantly altering. There was, in nature, 'no moving power but mind'".

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## BOOKS

## Twain's letters

The Selected Letters of Mark Twain edited with an Introduction and Commentary by Charles Neider  
Harper & Row, £8.95  
ISBN 0 06 014946 9

To open a letter from Mark Twain must have been a heady experience. You could count on its being mercenary and the authorship would be unmistakable, irrespective of signature or calligraphy, but nothing else was predictable. It might be boisterously good-humoured in the vein of much of his published work, whimsically self-deprecatory, ambiguously nostalgic, irascible sometimes to the point of self-defeating irrationality, bleakly melancholic, or amusingly plegmatic in the tones of one who has long ceased to expect any rationality from human behaviour anyway.

His letters could vary in length from the crisply (and often witheringly) laconic to the relaxed garrulous, but they were very rarely dull. More than seventy years after his death they are still eminently readable and perhaps the more enjoyable because of our detachment from the circumstances that prompted them. Mark Twain would have disapproved of their publication, having always done all he could to frustrate the enterprise. "All private letters of mine make my flesh creep", he once said, "when I see them again after a lapse of years". The exasperation at which his correspondents were frequently moved, or their long-suffering patience with his idiosyncrasies, are apparent only in their replies, but those can be conveniently disregarded by a selection such as this which concentrates exclusively on Mark Twain's perspective.

Over the last quarter of a century Mark Twain's life and writings have been subjected to a degree of scholarly scrutiny that has not commanded universal approval even in the academic world. The proliferation of books on all aspects of the subject and the bibliographical zeal to establish a high standard of textual accuracy have to some seemed excessive. This is a matter of opinion. What one had hoped was by now axiomatic, however, was the unreliability of the texts of the letters as published by Albert Bigelow Paine in his two-volume edition of 1917. Having appointed Paine his official biographer in 1906, Mark Twain quickly and characteristically had second thoughts. Within two years he told Howells "if Paine should apply to you for letters, please don't comply", and his secretary observed that "Mr Clemens has lost confidence in Paine".

For many years now one who has had occasion to handle any of the originals of these letters has had his confidence in Paine either, or the unreliability of his text, and he is more likely to be a student of the letters than a collector of them. The unreliability of Paine's text has been due to excess of loyalty, but, as Henry Nash Smith and William M. Gibson noted in 1959 when editing the Mark Twain/Howells correspondence, such of those letters as had been previously published had appeared "often partially and with errors, bowdlerizations, and 'corrections' by Albert B. Paine". Others of us have subsequently identified some of these "corrections" in other instances as altering the whole tone and sense of a letter very seriously indeed and appointing, therefore, that Charles Neider, wishing to bring out a fresh selection of the letters, should unadventurously and explicitly rely, "with few exceptions", on Paine's text and selection, and should content himself merely with the comment that Paine has been "underrated" as a result of "more precise, more pedantic and more costly literary scholarship, scholarship increasingly leaning on computers". Certainly undertake to do a selection of letters at this time without depending heavily on Paine would be an immense task, but it would be worth doing now that so much wider and more definitive a body of texts is

accessible to the selector, and meanwhile there is no need to depend uncritically on Paine. However, until the bolder task is undertaken, this "frankly idiosyncratic" selection which deliberately avoids trying to be "representative" or "balanced" is likely to find the "sympathetic readers" it seeks.

Dennis Welland

Dennis Welland is professor of American literature at the University of Manchester.

## After the fall

Arthur Miller: new perspectives edited by Robert A. Martin  
Prentice-Hall, £10.45 and £3.70  
ISBN 0 13 048801 1 and 048793 7  
Arthur Miller  
by Neil Carson  
Macmillan, £10.00 and £2.95  
ISBN 0 333 28923 4 and 28924 2

Over the last thirty-odd years Arthur Miller's reputation has fluctuated violently. Acclaimed in the late 1940s and early 1950s as the leading contemporary American playwright, he dropped precipitously out of favour in the 1960s.

The great commercial and critical success of *Death of a Salesman* prompted an angry critical response from such critics as Eric Bentley and Mary McCarthy; if it's popular, it can't possibly be good. *The Crucible* was attacked on political grounds, with cold war invective which makes depressing reading today (witches and communist spies were not real, but communist spies were). And apart from the experimentalist, which has dominated recent theatrical history: largely indifferent to the influence of Beckett, Brecht, Artaud, Grotowski, he has persisted in writing a post-Ibsenite realist drama.

Major London productions of *All My Sons*, *Death of a Salesman*, and *The Crucible*, together with the television drama *Playing for Time*, would seem to compel a reassessment. Free from the immediate topical controversies which have always dogged his heels, Miller's stature more apparent with the passage of time. His plays stand up remarkably well, and seeing them again suggests that realism in drama, far from being outmoded, is still a vital tradition. If the time is ripe for a reassessment, *Arthur Miller: New Perspectives* is a botched opportunity. Where rather in 1906, Mark Twain quickly and characteristically had second thoughts. Within two years he told Howells "if Paine should apply to you for letters, please don't comply", and his secretary observed that "Mr Clemens has lost confidence in Paine".

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by Gerald Weales and Ruby Cohn (chapters reprinted from books published in 1969 and 1971), and intelligent commentaries on the form of *The Price* and on *Incident at Vichy* as existentialist drama, by Weales and Lawrence D. Lowenthal. But no essay is included on anything Miller has written in the 14 years since *The Price* (1972) nor *The American Clock* (1980) "has yet received major critical attention" does not justify the publication in 1982 of a volume which pretends Miller stopped writing in 1968, especially in view of the fact that half a dozen essays were commissioned for the volume, *Playing for Time* (1980), a work of considerable stature to *The Price*, is mentioned only in the chronology of important dates and not even given a sentence in the editor's introduction.

Neil Carson's *Arthur Miller*, one of six volumes which inaugurate Macmillan Modern Dramatists, is a more responsible piece of work. It contains careful and informed discussions of nine plays, including *The Creation of the World*, *Playing for Time*, and Miller's early, unsuccessful *The Man Who Had All the Luck*, as well as two introductory biographical chapters and a brief survey of Miller's non-theatrical writing. Though perhaps a less distinguished piece of criticism than Dennis Welland's *Miller: A Study of his Plays* which covers much of the same ground, Carson's book is a sound, reliable introduction to Miller, which can be recommended to students.

Carson's great virtues are clarity, sympathy, and judiciousness: in considering the trickiest and most problematical of Miller's plays, *The Crucible*, *A View from the Bridge*, and *After the Fall*, Carson attempts in each case to ascertain Miller's aims and then measures his achievements against them. He carefully places each play in an appropriate historical and theatrical context, and is never content simply to retail clichés. He asks the right questions, even though he backs away from offering answers, or expressing controversial opinions.

If Miller's plays at best are characterized by heightened dramatic intensity, a command of theatrical effect, they are equally relentless in their desire to educate, to mould or challenge the attitudes of the audience. The most recent of his works, *Playing for Time*, once more embodying his conviction that "sociology is inside man and man is inside society", provides a retrospective summary of his career. In reworking the materials of the relatively unsuccessful *Incident at Vichy* (all talk and little characterization or action) in such intensely dramatic and laconic form, while providing another magnificent central role, he demonstrates all his strengths as a dramatist.

Warren Chernaik

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## How the West was seen

Land of Savagery, Land of Promise: the European Image of the American Frontier in the Nineteenth Century by Ray Allen Billington  
Norton, £13.50  
ISBN 0 393 01376 6

The American West has never been solely American. From the time of Columbus it existed in the fancy of diverse Europeans. By 1900 it supported a huge publishing industry in Europe: one author alone, Germaine de Staël, sold thirty million copies of his frontier novels in the late nineteenth century. Ray Billington explores the range and significance of this industry. He deals not only with novels (including the countless imitations of James Fenimore Cooper), but the publication of letters of emigrants, accounts by travellers, and the blandishments of land-promoters. He concentrates

mainly on northern European literature but he includes some material from Eastern Europe and Russia as well. Billington shows that the dual images associated with the frontier - garden versus jungle, ennoblement versus degradation, opportunity versus catastrophe - were invented as much by Europe as by America. The much by Europe as by America. The opposing views coexisted, but over time there were shifts. Attitudes of nature were crucial. In the earliest view, the New World's wilderness was seen as an Eden of plenty, equality and virtue. Reports by the first settlers changed this to one of Indian barbarism. Eighteenth-century romanticism again switched the emphasis to pastoral bliss and the noble savage. In the nineteenth century this gave way to trust in technology, a stunning of wilderness, the belief that nature should be tamed and exploited. After the Civil War, agricultural depression produced grim views of life on the frontier. As the society became more urban and the "garden of opportunity" view of the West faded, it was replaced by the new stress on excitement, on adventure rather than fortune. Like their American counterparts, the attitudes of European writers toward the Indians were varied and contradictory, but as the century wore on, Europeans tended to portray them as decadent victims rather than strong and fearsome warriors. Some kind of assimilation into white society seemed the only hope.

Billington discusses the effect of this literature on Europeans themselves. He claims, without much evidence, that the writers had some influence on emigration. He strikes a richer vein when he deals with the challenge of the frontier to European political thought. One of his best sections shows how conservatives used the "safety valve" theory - that the surplus lands of the frontier made an outlet for popular aspirations - to argue that American democracy could not work in Europe. Without that safety-valve, they argued, political reform would cause an explosion.

Land of Savagery, Land of Promise is a superior guide to an important body of literature. As a work of analysis it is not very successful, but it shows the way. Billington is his own frontiersman.

Rupert Wilkinson

Rupert Wilkinson is reader in American studies at the University of Sussex.

## New Paperbacks

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39 Store Street, London WC1

RKP



# BOOKS

## Values in perspective

Between Science and Values  
by Loren R. Graham  
Columbia University Press, \$25.90  
ISBN 0 231 05192 1

Why is eating people wrong? The answer you get depends upon whom you ask. One sort of anthropologist will tell you that the prohibition is embedded within a system of taboos that functions in maintaining tribal solidarity; another sort will point to the relative availability of alternative protein sources. An experimental psychologist may invoke "operant conditioning", and a sociobiologist may dilute upon the genetic basis of altruism. A clergyman will offer scriptural exegesis, and the (non-canonical) layman will simply look ill and tell you that eating people just is wrong.

The example is not entirely frivolous: it crystallizes the major theme of Loren Graham's important book. Take the anti-anthropologist maxim: as a "value", imagine this value as a piece of desirable territory and its different explanations as strategies for carving up and occupying the territory.

Since the late nineteenth century the competition between various specialized intellectual elites for the rights to explain, protect or impugn human values has been intense. This competition has often been at its most bitter when natural scientists and more traditional intellectual groups have been arrayed against each other. Some scientists have adopted what Graham terms an "expansionist" strategy: values are proprietary to be explained using the intellectual resources of the scientist. Ultimately, expansionists say, this is a problem for the geneticist, the experimental psychologist, even for the chemist and the physicist. Still other scientists, no less competent or rigorous, claim that there are places where the techniques of the natural scientist cannot go. These are Graham's "restrictionists", and their strategy leaves part or all of the terrain of values to the lawyer, the clergy, the politician, or the sofer of the social scientists.

Graham's book consists of a series of essays on science and values actually taken up during the twentieth century in different cultural and national settings. He focuses on the writings of scientists who have publicly reflected on these matters from their platforms of acknowledged expertise. Graham's approach is comparative. For example, he contrasts A. S. Eddington's reaction to relativity theory with that of the Soviet physicist V. A. Fock. Eddington maintained that scientific knowledge was actively created by the human mind, apprehending what Wind had put into nature. It was therefore "pointer reading" and was therefore based on a restriction of the ways of cognizing available to man. For Eddington "there are regions of the human spirit untrammelled by physics": one could perceive things through the soul as well as through the eye. Eddington's restrictionism and dualism left space for knowledge founded upon religious sensibilities and for religious authority in sanctioning human conduct. By contrast, Fock denied all forms of idealism and dualism, adapted relativity theory so as to display its compatibility with the idea of an objectively existing and objectively knowable reality, and rejected the intellectual credentials of clerical moralizers.

Another chapter treats the different political affiliations of eugenics in Germany and the Soviet Union during the 1920s. Here Graham valuably reminds us of what may surprise many present-day polemicists: that there was a period in which Marxist intellectuals saw no inherent reactionary political implications in either eugenics or in hereditarianism in general. Some of the most powerful persuasive Soviet tracts of the 1920s argued from a hereditarian position on human nature to the

practical possibility of constructing an egalitarian society.

In fact much of the evidence in this book supports the conclusion that there are no implications in scientific knowledge at all; people construct them. The suggestion would be that if you want to make a revolution it is more effective (although more difficult) to attack reactionary institutions than reactionary ideas. There are also useful essays on behaviourism, primatology and sociobiology. Bergson and Monod; Tielhard de Chardin; and on Heisenberg's cunning strategies for securing the cultural place of science in changing German political conditions.

In the main this is an historian's book. Graham is not overly troubled by philosophers' taken of "the naturalistic fallacy". That you cannot get logically from an "is" to an "ought" has no bearing upon the historical understanding of attempts to do just that. There is little tendency here to evaluate the different strategies, and a few chapters with a policy slant (for example, on biomedical ethics) appear slightly out of place in the book as a whole.

Graham's breadth of scholarship is impressive; his comments Russian, German and French, as well as British and American materials, and his comparative approach is welcome. One is reluctant to pick nits, but there are several problems with his overall handling of these issues. First, Graham's preferred method is individualistic and typological: X was a restrictionist; Y was an expansionist. One gets less sense than one should of the constituencies for the various positions and the reasons why one might be more credible than another in different settings.

Second, there is the notion of "values" itself: according to Graham, "what people think to be good". In his usage the "values" have more an aesthetic than a political flavour, and many British and Continental palates may find this characteristically North American category less than satisfying. On this side of the Atlantic, the favoured speech is of "interests" and "ideologies". "Values" and "interests" are not interchangeable locutions. To talk of "interests" one would have to be concerned (more concerned than Graham is) with the social groups that supported these strategies and with the question of what was at stake in their outcome. A fine book might have been even better had these matters been systematically addressed.

Steven Shapin

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## Descent from the trees

The Human Primate  
by Richard E. Passelungham  
Freeman, £14.95 and £7.50  
ISBN 0 7167 1356 X and 1357 8

Ever since the debate between T.H. Huxley and Bishop Wilberforce the relationship between man and his nearest neighbours in the animal kingdom has been a subject of fierce controversy, often conducted with little or no regard to evidence. Physical anthropologists are notorious for their propensity to bent one another over the head with their own fossils, and to infer the lifestyle of an extinct species from a single tooth.

The latest and possibly the most naive group to join the fray, the sociobiologists, are given the dogmatic assertion that all human behaviour can and should be explained in terms of man's genetic heritage. There was a need for a readable, eclectic and unbiased book that refrained from drawing conclusions on the basis of inadequate evidence and Richard Passingham has now provided it.

He points out that in many ways the similarities between man and the great apes are more striking than the differences. There is a much bigger difference in the genetic makeup of chimpanzees and mouse than there is between man and chimpanzee; 98 per cent of the genetic material is identical in the latter two species. Although man's brain is about three times as large as a chimpanzee's, the ratio of cortex to the remainder of the brain increases with brain size in primates and the ratio in man is accurately predicted by extrapolating from that found in other primates' brains. The sensory apparatus of monkeys and apes is very similar to our own: monkeys can be trained to recognize single syllables and continue to recognize them when they are spoken in a different voice. Dr Passingham suggests that man's superior intelligence depends more on the increase in brain size than on specific changes in brain wiring, although it is difficult to find any variation in intelligence among people that correlates with individual brain size.

Chimpanzees can master a sign language of about 200 words and within this language can understand and put together new arrangements of adjectives governing a noun. There is more doubt about whether they can master the kinds of rules of sequence that determine the difference in meaning between "The dog bit the boy" and "The boy bit the dog". Chimpanzees use sticks and stones as tools in the wild, as well as Wolfgang Kohler has demonstrated, learn to use tools in much more elaborate ways in captivity. One group of captive chimpanzees learned to carry a long branch and prop it up against a wall in order to use it as a ladder: to the embarrassment of their keepers they eventually decided to use this method to escape from captivity.



Chimpanzee threatening

Primates, including man, are of course highly sociable animals. Chimpanzees spend much of their time playing together or grooming one another and the infant bereaved of its mother shows all the symptoms of depression. In the wild, different colonies of chimpanzees develop individual variations in culture. Some groups eat termites using sticks to fish for them in their nests, others ignore termites. Only one group of chimpanzees is known to use leaves to wipe their bottoms. Such cultural inventions are passed on from one generation to the next, but there is no evidence that any attempt is made to teach their use, although adult chimpanzees will sometimes attempt to stop the young from eating a new or dangerous food.

Perhaps the most novel and certainly the most controversial aspects of *The Human Primate* are Passingham's views on temperament. He maintains that although in all primates there is a division of labour between the sexes, "there is no need to suppose that it is temperament which determines the choice of activities between the sexes; the division of labour is adequately accounted for by the consequences of childbirth for the female". One could argue that it is probable that in the course of evolution innate mechanisms will have developed to facilitate the necessary division of labour. It is surely not for nothing that

males tend to be larger and stronger than females. Moreover, there is evidence, not mentioned by Passingham, that the male hormone, testosterone, plays a role in determining aggression.

He is more convincing in his rejection of innate factors directly determining the territorial drive and dominance hierarchies. He points out that one species of monkey forms and defends territories in a habitat with little food, but does not establish territories in a different habitat containing plenty of food. Moreover, a dominance hierarchy will always be established if animals can recognize one another and learn to challenge only those against whom they are likely to win a fight. The point that there is no need to postulate specific territorial and dominance drives is well taken and should be pondered by sociobiologists. But it is hard to give an account not based on instinct for the universal animosity shown by primates to strangers appearing in their midst.

*The Human Primate* is an agreeable book which is free from jargon. Its clarity conceals the fact that it is based on a wide range of knowledge drawn from several disciplines, as evinced by the list of over a thousand references given in the bibliography. My favourite chimpanzee experiment is missing. A chimpanzee was taught to fill a cup of water from a tap, in order to extinguish a flame that guarded a tunnel down which the chimpanzee could reach to obtain a banana. Once the chimpanzee had mastered this task, the apparatus was placed on a raft with the tap in sight on land. The chimpanzee picked up the cup, but instead of dipping it in the lake, waded ashore to fill it from the tap. Maybe chimpanzees do conceptualize the world in a way very different from man or perhaps they are no more irrational than the numerous water-snobs who insist on drinking mineral water that is indistinguishable from tap-water.

Stuart Sutherland

Stuart Sutherland is professor of experimental psychology at the University of Sussex.

## Antibiotic armoury

The Enchanted Ring: the untold story of penicillin  
by John C. Sheehan  
MIT Press, £10.50  
ISBN 0 262 19204 7

More than fifty years have passed since Fleming observed the bacteriocidal effect of a *Penicillium* mould. This chance observation, followed up by experiments, enabled him to conclude that the mould produced a substance with the ability to kill many types of pathogenic bacteria. This substance, penicillin, still occupies pride of place in the antibiotic armoury, no doubt because of its efficacy and lack of toxicity. However, the road from laboratory to clinical application was long and hard, regulatory requirements.

The story of the early work in Britain which culminated in the success of Florey, with Chain, Heatley and Abraham and supported by the Rockefeller Foundation in the Sir William Dunn School in Oxford during the early years of World War II has been told many times, with various assignments of credit. In this book Sheehan emphasizes the contributions made in the United States during the war, in the collaborative effort with British scientists, and also particularly his own lonely quest for the synthesis of penicillin which he pursued at the Massachusetts Institute of Technology in the two following decades. It is of considerable interest since this part of the story has not been told before and, unlike several of the previous versions, the British side of things, is here told by a scientist who was directly involved.

By 1942 the Oxford group had overcome difficulties with the isolation of small quantities of penicillin, enough to show what it could do in man, and in collaboration with Sir Robert Robinson in the Dyson Perkin Laboratory at Oxford had achieved sufficient chemical results to allow Abraham and Chain to

propose what is now known to be the correct formula. This structure contained a striking and hitherto unknown feature, being a ring of four atoms. This, so-called  $\beta$ -lactam, is the "enchanted ring" of Sheehan's story and is in fact responsible for penicillin's biological potency. This unique structural proposal originally received considerable criticism, particularly from the chemist Robinson. However, by 1945 Dorothy Hodgkin had solved the X-ray structure and the case was considered proven, except perhaps by Robinson. In this regard, Sheehan cites a discussion in 1952 when Robinson synthesized the penicillin derivative on the basis that it contained the  $\beta$ -lactam structure and therefore was not a penicillin.

Florey was aware that conditions in wartime Britain would not permit development of large scale production and also that penicillin had potential military applications. Consequently he, with Heatley, visited the United States in 1941 and, as a result, workers in the Northern Research Laboratory of the US Department of Agriculture, Peoria, Illinois, were soon to make major advances on the large scale production of penicillin. There was another and far reaching consequence of this visit. Since the establishment, by Roosevelt in 1941, of the Office of Scientific Research and Development, the then director Vannevar Bush had established a committee on Medical Research which soon began to support what was to be a massive joint research programme on penicillin.

In this effort a collaboration was achieved between academics on both sides of the Atlantic, and importantly some of the major US pharmaceutical companies. Sheehan illuminates the difficult nature of such a collaboration involving secrecy, conflicts arising from necessary disclosure among the collaborators, and the ever present question of commercial interests. In spite of all this, however, information was shared and research advanced, with the result that penicillin became an available agent.

It was through his employment by Merck as a chemist that Sheehan's contribution enters the story. Although one of the goals of the Anglo-American collaboration had been the practical synthesis of penicillin, this was not achieved and the success of deep fermentation seemed to remove its need. So at the end of hostilities the programme was shut down. Sheehan, however, now at MIT, began a long journey directed towards this goal.

Synthesis, the modern alchemy, is the building up of molecular structures from smaller units. In this controlled way the chemist can create a substance which is identical to that of nature. Success eventually came and by 1956-57 Sheehan had made the core structure of penicillin, called  $\beta$ -APA. In spite of the so-called Drinker precedent, in which the inventor of the iron lung was criticized for patenting a life-saving invention, Sheehan applied for a patent on this new substance. Virtually simultaneously Beecham Laboratories, in England, obtained  $\beta$ -APA by fermentation and proceeded to make from it a vast array of new penicillins, the semi-synthetics, many of which are in wide therapeutic use. Sheehan describes the long and difficult litigation which ensued between himself and the British company. In 1979 the US Board of Patent Interferences awarded priority of invention to Sheehan.

This is an exciting story which is not yet finished. In the late 1950s Abraham at Oxford discovered the cephalosporins, a new group which have become the basis of a wide range of antibiotics. More recently other new and strange members of this class, all containing the enchanted ring, have been found in microorganisms. In fact it may be that these  $\beta$ -lactams are quite widely occurring in the microbial world. Sheehan's account describes a time when the modern research triangle of university, industry and government was being forged. Its subject, penicillin, continues to protect humanity.

J. E. Baldwin

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## Europe

# Different solutions to common problems

The 20 members of the Common Market face similar economic and social problems but have dissimilar approaches to their solution. France has chosen an expansionary path, although in François Mitterrand's second year the brakes have begun to be applied. Britain has taken a deflationary path. Most of the others have chosen some midway compromise.

As a result the higher education systems of the Common

Market have different experience. Expansion in France and new Greece, cuts in Britain, and a gentle settling into steady state in Germany, Denmark and the others, with Italy as an eternally chaotic but not unsuccessful exception.

This survey of higher education in the Common Market, however, reveals that there are difficulties all systems face regardless of the temporary political regime in their countries.



The contrast between the upturn of fortune in the French academic world and the dismal scene in Britain is little short of a miracle.

While Britain faces cuts in its higher education budget and student numbers, France last year experienced conspicuous growth.

In real terms, the French higher education budget grew for the first time since 1976. It rose by 15 per cent while the overall research budget - always a barometer of government confidence in higher education - leapt by a quarter.

Both the British Government and the French Prime Minister, Mr Pierre Mauroy face similar difficulties.

The rigours of monetarism and their consequences have brought about a reduction of tenured staff and the number of young people going into higher education in France. But the reassertion of a Keynesian economic strategy combined with long term planning has seen a move towards the expansion of higher education.

One of these is the increase in the number of academic posts together with measures to ensure continued promotion prospects and to infuse new blood into the academic profession.

Higher education in France is seen as crucial to economic recovery.

One of the consequences of this is not merely a renewed feeling of confidence in academia. It is also found in the belief that recovery can be brought about by reward and encouragement rather than by penalty and sanction. It remains to be seen whether the carrot is more effective than the stick.

In a curious manner, however, the incoming Socialist government of M. Mitterrand has persisted in the credo, so fashionable up the mind 1970s

## A conspicuous confidence in the future

which holds that investment in higher education is central to economic development.

Where such investment should be directed and how higher education's research potential should be linked with the economy were the subjects of long and sustained debate, beginning in July last year. The discussion reached its climax at a massive meeting in January, addressed by the president himself.

It is significant that the long term rethinking of higher education priorities have not been eked within the comparatively narrow confines of either education or social policy. Rather, they have been examined as an adjunct to science policy, research and development efforts and the rather more delicate issue - at least to French eyes - of the decentralization of government.

This is an entirely new approach to higher education policy in France. It stands in marked contrast to that adopted by the previous regime which, from 1968 onwards, was largely governed by a series of short-term measures.

These were intended on the one hand to bring higher education increasingly under the closer scrutiny of central administration. On the other, it was intended at all costs to avoid a repetition of massive student unrest.

Though France has yet to see the full fruits of this new perspective, it is evident that fundamental revision is on the way.

Symbolic of this was the letter the Minister of Education, M. Alain Savary sent out to all university presidents in March. It announced a new commission, headed by M. Claude Jeantet, to draw up a framework for a new higher education law. This would replace the battered remnants of its predecessor, delivered by Edgar Faure in the aftermath of May 1968.

The importance of this is twofold. First, because since 1976, government policy has been to whittle away what little autonomy the 1968 guidelines afforded individual universities. Second, because, the new Bill will place particular importance on the links between higher education on one hand and both the nation and the region on the other.

It remains unclear what powers the proposed regional councils will

have in the area of higher education. Even so, emphasis on the regional dimension links in with the larger political and strategic commitment of M. Mauroy's administration to the principle of decentralization.

Hopes are high that the new legal framework will involve a significant increase in decision-making powers granted to individual universities. There are already signs that on specific issues this trend is being strengthened.

One of the most important of these lies in the area of academic appointments. In some aspects, this is still a bipartisan policy. Both the Socialists and their predecessors are well aware of the effects of an aging professorate. The consequences this will have not only on morale, but also on the creativity necessary to sustain higher level research and development.

In order to plan for the anticipated pick-up in the birth rate towards the end of the century, both governments have maintained a policy of superannuation restituted by the minister to university presidents.

The essence of these five measures is to dismantle the Conseil des Corps Universitaires.

This was set up in 1980 and is seen by many as a middle-class overlord designed to restrain individual universities from recommending and obtaining candidates of their choice to fill vacant posts.

This is a stopgap measure. Doubtless, the final mechanism for academic appointments will emerge from the musings of the Jeantet Commission. But it is confidently predicted that wider discretion will be given to individual establishments.

The impetus for most of these strategic developments, many of them still at the discussion stage, came from the newly established Ministry for Technology and Research, headed by the dynamic Mr Jean Pierre Chevènement.

The imprint of this Minister on the French edition of the "Great Debate" - which appears rather less futile than its British counterpart - is clear from the discussion points set down in M. Savary's letter to university presidents. Among the more weighty were:

- The contribution higher education could make to combating the recession through teaching and research.
- Ways of developing those economic and industrial sectors held to be important in the future like, biotechnology and computers.
- The forging of closer links between universities, specialized research agencies such as the Centre National de la Recherche Scientifique and the national institutes for scientific and medical research.
- Different approaches for vulgarizing new knowledge with a view to raising the level of competence in the population as a whole.

Why has the Ministry of Education taken a back seat in thinking about the strategic and future development of higher education?

There are several suggestions. In the first place, M. Savary has maintained an extremely low profile. Given the feuds and spectacular venes of his predecessor, it is not imprudent. But there are other considerations as well.

The incoming Socialist Government did away with the separate Ministry of Higher Education, reverting to a situation that existed before 1974. This was the result of considerable pressure from the government backbenchers, many of whom are ex teachers and lecturers.

The separation of higher education from the rest of education was seen as a right wing attempt to "divide and rule".

Secondly, many of the opposition's efforts to discomfort the Government have involved unearthing an issue of great antiquity and much emotional appeal in Republican France - the issue of state subsidies to private, church-run schools. As could have been predicted, M. Savary's attention has been devoted to this diversionary tactic.

But measures relating to higher education have not been absent from the minister's activities over the past year. He has reversed election procedures for university presidents, brought in with great haste by the previous regime.

There has also been a quiet, steady departure of individual *recteurs d'academie* - not Britain's equivalent of vice chancellors or principals, but French education's equivalent to the prefect. The *recteur*

acts as the government's overlord in each of the country's 27 educational regions.

The admissions policy for foreign students has been liberalized to some extent. But perhaps the most important has been the publication of a series of circulars dealing with conditions of appointment, tenure and promotion, passed two months ago.

Tenure has provided a continual source of disgruntlement and ill-feeling throughout the year with the Syndicat National de l'Enseignement Supérieur, the largest higher education teachers' union, making noises of dissent and disappointment.

But beneath the surface the more intractable problems remain. Should some form of selection at entry to university be officially supported? At present the Baccalaureat, legally at least, gives a right to its holder to a place in university, though not in the *grandes écoles* nor in the two year university institutes of technology. What should the relationship be between the elite *grandes écoles* and what one academic once unkindly termed "the university swampland"?

The former was general of academia. Professor Laurent Schwartz, suggesting that a more rigorous pruning ought to take place. Those judged of "outstanding ability" should be given special grants to encourage talent and creativity as part of the campaign to strengthen the national research drive. He was severely mauled for his daring.

As for the latter the *grandes écoles* have successfully waged a subtle campaign. They pointed out in those areas where even more national investment is needed, namely engineering and electronics. The implication is, of course: "If it works, don't fiddle with it."

All in all, this year has been remarkably quiet. Higher education, commonly reckoned to be sympathetic to, if not an ardent supporter of, M. Mitterrand's party, is prepared to prolong the "state of grace" rather than the rest of the population.

The coming year will reveal whether the launching of commissions and the holding of debates will result in measures acceptable to that most touchy of bodies - academia.

Guy Neave

## Universities and the economy

An extraordinary rumpus broke out recently between the Confederation of Irish Industry and the statutory Higher Education Authority, ostensibly over university graduate employment statistics.

But the claims over the percentage of graduates going into employment were a cover for the real debate - the role of the university in a rapidly changing economy.

It is not a new debate but its resurgence in the media has a special urgency in Ireland where the immediate economic outlook is bleak. The confederation claimed that the country was producing too many arts graduates, and that the universities were not developing entrepreneurial skills among their graduates.

Mr Con Power, director of economic policy for the confederation and a former technical college principal argued: "Far too many of our best young people are being diverted into cul de sac areas of learning, whereas what we need is a far greater dedica-

tion to a national vision of innovation and enterprise.

"People in Ireland legitimately aspire to the enjoyment of higher living standards, but the achievement of those higher living standards will depend mainly upon our own economically productive efforts.

He was responding to a *Sunday Independent* newspaper article which mirrored some of the disillusionment felt in the universities over the new technologies.

Higher education institutes had reacted swiftly three years ago to predicted shortages of skilled labour needed to fill the new firms which were changing the face of Irish industry and helping to put Ireland into the top half dozen electronics exporting countries.

The expansion in engineering schools and other areas has not been matched, however, by a corresponding growth in the numbers of graduate openings in the new technologies. The careers and appointments

officer at Trinity College, Dublin. Mr Dermot Montgomery, wrote in his annual report: "One of the most disappointing areas of recruitment was the Industrial Development Authority sponsored firms in the electronics field."

Comparing notes with his colleagues in the other university colleges, he had been able to identify only 15 primary degree graduates in electronic engineering from the universities as a whole who obtained jobs in 1981 with the "new wave" organizations.

The Industrial Development Authority has since admitted that the original estimate of how many workers were needed erred on the generous side.

The confederation also rejected any notion that there was an over emphasis on the production of technologists and said the universities must play a fuller part in the development of the economy. It cited, as examples, the involvement of the



regional technical colleges.

According to Mr Seamus O'Connell, academic secretary at University College, Galway, the universities tend to see the state as underemphasizing their contribution to higher education and not giving sufficient weight to the values that the universities believe to be important.

He said: "The newer institutions,

with their emphasis on technology and the applied sciences, are seen to attract, state funds in greater proportion than the universities, at a time when the scenario painted for the universities is one of nil or negative growth in real terms."

He noted that government ministers made observations on what they regarded as the "waste" of resources by the universities in maintaining human studies at their present levels. They compared the "lack of relevance" of the universities with the "relevance" claimed for studies in the new institutions.

Competition with the newer, more aggressive institutions for scarce resources coupled with demands for more "relevance" in their courses will, some academics fear, erode traditional university autonomy. For the simple, economic fact of life is that 85 per cent of university funds come from State coffers.

Apart from attracting more funds, the newer institutions are also attracting more new students. The

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universities currently account for two thirds of the full-time student body in higher education. But by 1990, with the development and expansion of the non-university sector, it is estimated that the universities' share of the student body could drop to 55 per cent or less.

Too many students chasing too few places

The most characteristic feature of German higher education since the 1950s is the persistent increase in the number of registered full-time students; there were some 170,000 in the winter of 1980/81 and just over 1.1 million in 1981/82. The steepest rise occurred in the second half of the 1960s.

As a result of an increase in the 19 to 21 age group, and financial support for students the percentage of the age group proceeding to higher education rose from 7.9 in 1960 and 12.4 in 1980.

What distinguishes the Federal Republic from Britain is that - after a short halt and even decline between 1975 and 1977 - the number of new entrants has been rising again and is expected to continue to do so for another few years. Economic stagnation and graduate unemployment do not seem to have deterred young people from higher education.

The number of 18 to 21-year-olds will peak in the second half of this decade and since, on average, a German student spends five or six years the total student population is now expected to reach its maximum, 1.3 to 1.4 million, in the early 1990s.

The problem of accommodating



these masses of young people who have come to regard higher education as an automatic progression from secondary education, continues to be the most influential factor in higher education policy. For almost 20 years this has largely been a direct response to pressure. Lately financial pressures are beginning to take over.

The numbers problem is particularly acute because of the constitutional right of all qualified grammar school-leavers to study any subject of their choice at any higher education institution. "Qualified" in this context means having passed the Abitur, the grammar school leaving certificate, whatever the combination of subjects. Since its reform in 1972 pupils can be more selective in their choice of subjects studied during the top two forms. Now the universities complain vociferously that students are not up to the standard required especially for the most specialized university courses. Ministers of education are already considering undoing some of the reforms.

The main way to cope with these hundreds of thousands of extra students was to enlarge the system. The achievement here is considerable: some 250,000 new student places were created between 1970 and 1980 alone, and in the current year still approximately DM 2,000m are being spent on modernizing and replacing old buildings and constructing new ones.

In the process a new partnership, was founded between the states (the Länder) who have prime responsibility for education, and the federation which, at least until very recently, was able and prepared to assist the Länder by means of substantial building grants. This collaboration has added an important element to the structure of German federalism: without it the German higher education system might have collapsed.

Yet it is precisely here where the anxiety for the future lies. Two years ago the federal government had

budgetary difficulties and unilaterally cut back its share of capital grants. The resulting differences have for now been patched up but the capital resources available now and for the foreseeable future are on a more modest scale.

The Länder, most of which have financial problems of their own and are controlled by the CDU opposition, find it convenient to blame the federation for the much reduced building programmes. The seeds for another prolonged political and constitutional conflict have been sown. It is probable that higher education - which in Germany especially since the student unrest of the 1960s has become excessively politicized - will suffer.

Higher education, which 20 years ago enjoyed a high status and was the darling of all three major political parties - much more than tertiary education ever did in Britain - is experiencing a distinct decline in the popularity stakes. The change from an elitist to a mass system and the elaborate structural changes have not brought the expected benefits.

It may not altogether be a bad thing to allocate public funds more sparingly and critically in the future - some of the new university buildings in West Germany are, indeed, very spectacular, lavish and expensive to run. Nor would it be undesirable if some of the additional students voluntarily went to those of the new universities like Augsburg, Passau, Oldenburg which still have vacant places, thus relieving the pressure on popular universities like Berlin, Bonn, Münster or Munich.

However, in spite of all the deliberations in the federal and Länder ministries, in government planning committees and advisory councils, there appears little likelihood that this will actually happen. German students are essentially conservative in the choice of their place of study and their course. At least as long as many of the new institutions lack a "reputation" and offer only a limited range of subjects with little choice of lectures, they will stay away from such places.

And an increase in recurrent expenditure to allow for a further substantial expansion in staff and equipment at the new universities is out of the question.

All German governments face the need to contain expenditure, though far less dramatically than the British government thought necessary. Just as quite sizeable capital grants are still made available cutbacks have not led to threatened tenured (civil servant) posts until they have been frozen or lost. A larger number of temporary appointments have not been renewed yet only now has one minister - the Northrhine-Westphalian higher education minister - come forward with a plan which remotely resembles the restructuring schemes imposed on British universities. And again, people in established posts will be protected.

Given the continued rise in student numbers and the failure of the promises to provide the universities with temporary help in the shape of an "overflow" program in the life of many German university teachers has become tougher, with larger classes, more teaching, more marking and examining, and, for some, less time for research. There are many complaints from academics on the latter point, and disquiet is expressed about the standard of the Federal Republic's research output.

The very rapid growth, the fundamental change of the character of the university sector, the increasing bureaucratization and the educationally-dispersed and impaired research activity. Hence the importance of the role of the federal government in defining national research policy by stating, for example, priority areas; and of the self-governing research

Call for shorter and cheaper courses

Last July 26,500 persons applied for places in higher education under the coordinated enrolment system. About 20,200 or 76 per cent were admitted, whereas about 6,300 or 24 per cent were refused.

By July 1 all applications had been received by the University of Copenhagen from various universities and institutions and by July 28, the students had received an answer. Those 6,300 who were refused admission - on grounds of low average marks or restriction of admission - were invited to consult an educational counsellor. They would discuss whether the person should try for admission next year, choose another course or take a job in order to gain more marks and thus have a chance next year.

The coordinated enrolment system permits students to apply to eight institutions or study programmes and so increases their chance of getting a place. Out of the 20,000 who were admitted, 16,500 got their first choice.

In Denmark, as in many other countries, there has been growing public concern about further and higher education. Students are pressing to get a higher education, the costs have increased and funds are limited.

Higher and further education is financed by the state but the students have to pay for their living. They provide the funds through loans obtained from banks and saving banks which are state guaranteed. The interest varies from 15.5 per

calculation social and economic factors are considered.

Mrs Bennedsen says: "We have to supply trade and industry with the kind of graduates they need, and we have to look at the unemployment situation in the various fields. Many who have graduated from the faculty of art are unemployed after having read for perhaps 10 years. Last spring we made an arrangement with IBM to the effect that 27 of those who were long-term unemployed were being retrained by IBM to become EDP-station course took six months and the ministry of education paid unemployment relief during that period. All of them got a job afterwards," says the minister.

"What we need are shorter and less expensive educations," says Mr Jakob Lange, register at the University of Copenhagen.

"Within further education, the officially stipulated time of study is three to four years and within higher education five to six years. But the studies last longer, and the students often give up out of economic reasons, as an example, only 20 per cent of those admitted to the faculty of arts graduate," says Mr Lange.

Higher and further education is financed by the state but the students have to pay for their living. They provide the funds through loans obtained from banks and saving banks which are state guaranteed. The interest varies from 15.5 per

As a result of this trend, legislation was introduced in 1976 to regulate access to further and higher education. Until then admission was open (with some exceptions) and intake to these courses increased greatly from 1960 to 1977. The Act of 1976 authorized the minister of education to regulate entry to the courses of further and higher education. For example, admission to the schools of dentistry and midwifery had been restricted for decades while admission to universities was unlimited.

In fixing quotas, consideration is not only given to estimates of the future needs for graduates, but also to the capacity of the institutions and the geographical distribution of the applicants.

The minister of education, Mrs Dorthe Bennedsen, says: "With the explosion of young people who seek to graduate from 'the gymnasium' (the Danish upper-secondary school) which has taken place during the past 20 to 25 years, it has been necessary to regulate admission to further and higher education. It is impossible for the universities and institutions of higher education to accommodate almost one third of a



cent to 19.5 per cent but state educational support is also given to students of 18 years or over in the form of scholarships. These are granted according to the financial need of the applicant.

It has, however, become difficult to repay the loans because of the length of the courses. And this in turn is due to the students' financial difficulties since they normally need to have jobs while they study. In

support bodies, which are largely financed from public funds, in directing these. It appears that a more coherent long-term science and research policy is in the making.

Many academics are unhappy about their greater involvement in institutional self-government, following the reforms of the early 1970s: German academics are still not used to the spending time on such activities; and, indeed, the active interest in internal democracy seems to have fallen. This is not only the outcome of a disillusionment with the effectiveness of democratic decision-making procedures but also the result of the need to work harder in the case of staff, and the anxiety about job prospects among students.

More and more often the question is being asked: "Are we producing too many graduates?" There are currently almost 50,000 graduates without jobs, 43 per cent more than a year ago. Those qualified for a teaching career - the major outlet for most German arts graduates - are worst hit, and their numbers will multiply many times over the next few years. In Germany the government is traditionally the main employer of graduates, some three quarters enter the public service. But it is here that the financial difficulties are most acute.

For several years the need for less vocational undergraduate courses has been stressed yet little has been achieved. The universities take little

cheaper courses

spite of this it is not unusual that graduates find themselves with a debt of 100,000 to 200,000 kroner. The minister of education says that the possibility of introducing state loans instead of bank loans is being discussed at the moment. These loans should be three per cent under the market discount.

As far as finance is concerned, the state does not allocate funds to continuing education, except in the case of upper-secondary school teachers. Should, for instance, a lawyer want to attend a specialized course in forced sales, his office will usually pay for it.

In Denmark there are three universities and two university centres. The structure of the institutions is different. At the university centres you undertake a basic studies programme lasting three years, before you specialize on a subject.

Besides the universities there is a vast amount of specialized institutions of further and higher education throughout the country. There is a distinction between further and higher education, the latter being connected with research at the universities or institutions of higher education, such as for example the technical university of Denmark and the Royal Danish Veterinary and Agricultural University, both of which, confusingly, are called high schools in Danish.

Most institutions are under the jurisdiction of the Ministry of Education, whereas others, such as the Royal Academy of fine arts concerns the Ministry of Cultural Affairs and the schools for physiotherapy and occupational therapy, the Ministry of Education has three main sections and five directorates.

Those who have left school with the upper secondary school leaving examination, the higher preparatory examination or the higher commercial examination are in principle admitted to institutions of higher education. But the increasing number of applicants means admission has to be restricted.

In addition to the Ministry of Education and its directorates, there is the Council for Research Policy and Planning, also under the ministry. It was established in 1974 to advise on research activities and it is heading six research councils: those of natural science, medicine, agriculture and veterinary, social science, humanities and scientific and industrial research.

The six councils had a budget in 1982 of 159.6m Kroner. On the finance bill for 1983 the amount is 175.7m, an increase of not even 10 per cent to allow for inflation, in fact a reduction.

introducing cost-based tuition fees. In this context the Fachhochschulen (advanced vocational colleges) score: they were only elevated to the level of level 10 years ago yet have, with their three-year, well-structured, vocational courses expanded rapidly and established close links with industry and commerce.

Particularly in the last few years students who do have to have the Abitur have flocked to them, not least because job prospects after graduation are better. Here students have reacted to market forces, and governments, partly responding to demand, partly for once, attempting to channel personal demand into a specific direction, have latterly produced more money to boost this sector at the expense of the universities.

In general, though, the experiments now desperately avoided in legislation at Land and federal level, supplemented by detailed administrative decrees by the Land bureaucracy; and, on the other, of the excessive involvement of the courts in all sorts of questions concerning higher education institutions, Verrechtlichung, juridification, has emerged as one of the characteristic features of Germany's higher education. Universities over the next few years.

Higher education policy in the Federal Republic is currently a no-policy. It is characterized by indecision, helplessness and inactivity in the face of this fundamental dilemma. This also accounts for the fact that the role of higher education

institutions in continuing education has only had a very limited airing so far. Traditionally adult education has not been among the tasks of German universities and few academics and politicians have the foresight to consider their future role.

It is calculated that funds allocated to research about one per cent of the GNP, half of which is provided by the public sector and half by the private sector.

The budget of the Ministry of Education for 1982 was 11.5 billion Kroner and the finance bill for 1983 states the amount of 15 billion.

"This is due partly to increased scientific knowledge and partly to the growing demand for raw materials, in particular energy. In order to estimate the need for Denmark to educate geologists and geophysicists, a committee was formed last year to evaluate the need for those specialists in regard to Denmark's exploration of North Sea oil and gas reserves. The result of the committee's work was that we will need between 110 to perhaps 230 geologists and geophysicists in the course of the next few years. Another thing which is needed to improve research work within almost all fields, is replacement of scientific instruments. Many of them are outdated and outworn. A special fund of 90m Kroner has been allocated to replace some of it during the next four years," says Professor Birkeland.

During the 1960s a vast number of researchers were employed and they are representing a bulk which now prevents employment of younger persons since the economic situation does not make it possible to create new jobs for them.

This autumn the question of employment of research workers will be discussed. One plan is to employ as many as possible for a period of three years to begin with, to evaluate their work and research ability. If the results are satisfactory, they will be employed for three more years after which it is hoped that 70 to 80 per cent will find permanent employment. This way it is hoped to establish a long-term solution to the recruitment of research workers.

Denmark does not lack qualified researchers but the country is short of money. On the one hundredth anniversary of Professor Neils Bohr in 1985, the Danish industrial sector will finance scholarships to 16 research workers who are highly qualified but have no funds. For three years they will be able to do basic research in natural science in the broadest sense.

Research is not only being done within the academic world. Some ministries have their own research departments, such as the Ministry of Energy, the Ministry of Agriculture and the Ministry of the Environment.

annexes to the mass universities, the campuses themselves were passing through their "sanitization" process. Disgruntled students, prompted by lack of facilities chaotic teaching procedures, disillusionment with politics, a labour market unable to absorb the glut of graduates (72,000 last year) and their own lack of preparation for tertiary education, fled the faculties in droves.

Enrolments, which hit an all time record of two million in 1978, levelled out last year at 1.3 million while the number of A level students going on to university plummeted from 20 per cent in the late 1970s to 73 per cent last year. One academic triumph: "Without doing anything the staff is being separated from the corn."

Most significant for many students was the realization that the Laurea (bachelor degree) would no longer guarantee them a job in a country where the Laurea is automatically linked to a higher income bracket.

In addition labour movement claims had eroded the difference in wages between skilled labour and graduates to such an extent that many students felt four years of study were hardly worth the trouble to gain a few more lire in their pay packets.

One Rome faculty dean said: "A growing number of students realized that only if you had a high level of qualification were you likely to find employment on the labour market. And so they pushed the professors to be more severe."

"A research fellow in education added: "We have come to the end of a cycle in which it was thought that education would guarantee an income for everyone."

The sudden drop in the student population caused some anachronisms. A chemistry professor at Rome

Politics starts to lose out to tutorials and text books

The walls are whitewashed, the streets clean, the Aulus reflect an air of respectability. Gone are the barricades and the police riot squads at the gates.

Rectors no longer drive bullet-proof cars, staff no longer sneak into offices through back doors, afraid of being ambushed by belligerent students.

Over the past two years Italy's turbulent state-run campuses have not only tamed their hostile image but also some of the concepts that made them the stalwarts of mass instruction in a country where everyone with a secondary education could enrol in the faculty of their choice and be almost assured of a degree.

Today the textbook has once more replaced the political poster, the tutorial the political rally and the vocational guidance officers the ideological cadres.

Yet the major dilemma still facing Italian educators and legislators is not only how to dissolve the legacy of a decade of running medical but how to turn the country's former mass universities into institutions of higher education competitive with the rest of Europe, without giving them an elitist image.

The solution in some cases has been rather Byzantine. Academics and politicians quietly agreed on the need to return if not to *numerus clausus* at least to some quota system to reduce overcrowded faculties and weed out weak students. But the Italian parliament passed a reform bill in August which awarded rectors the power to close enrolments for any faculty once they passed 4,500 - so leaving the unpopular decision of closed numbers to campus administrators.

To appease those clamouring for decentralization, Parliament authorized the construction of nine new universities. This brings to 22 the number of new campuses authorized since 1974, though none of them has so far been built and those planned threaten to be B and C grade campuses.

While Machiavellian politicians took one step after another to dismantle the mass universities, the campuses themselves were passing through their "sanitization" process. Disgruntled students, prompted by lack of facilities chaotic teaching procedures, disillusionment with politics, a labour market unable to absorb the glut of graduates (72,000 last year) and their own lack of preparation for tertiary education, fled the faculties in droves.

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of universities with an interdisciplinary approach. Most of the projects are tied to the needs of the country, like the projects on water resources and the changing patterns of residential areas.

Coupled to the new policy was the appointment of 3,000 new researchers (bringing the number of researchers of 36,000) who are now members of a category entirely dedicated to research and no longer expected to use their work as a stepping stone to an academic teaching job.

While funds are administered by the National Research Centre (CNR) and allotted directly through university administrations for distribution (to eliminate craft and corruption) academics complain that their funds arrive more than a year late.

One academic said: "someone along the line is making a bomb from the interest rates which the funds accumulate as they inexplicably waiting to be passed on."

The reshaping of antiquated campus structures along Anglo-Saxon lines - with departments, tutorials and study courses - was followed this year by creating a PhD doctorate that intends to capture the brightest students in each faculty and give them an opportunity for postgraduate study on a fairly generous government stipend.

The doctorate is seen in academic circles not only as a way to weed out the good from the bad students (something that entry exams could do) but as the first step to boost Italy's academic standards and lay the foundations again for an academic elite.

Still the new academic proletariat was soon found to have been chosen by selection committees more for ideological and political motives than for academic performance. Several senior academics were flunked while unknown figures took their place.

Professor Franco Ferrarotti, dean of Rome University's sociology department, said: "The criteria seemed to be to disapprove those already committed to academic groups and to appoint the isolated *dummkopf*, the people who had no standing in the academic community but could be manipulated."

Worse. He claims the sudden increase in tenures and the hurried distribution of academic chairs has virtually blocked what he calls "the rejuvenation of academic staff" for the next two decades.

This is because new appointees are generally young and the number of professors has outstripped the legal professor-student ratio for the first time, making further appointments unlikely for many years.

In fact the Italian campuses, once showcase examples of overcrowding and staff shortages are suddenly in the enviable position where the professorial numbers go up while the student population goes down.

Tenure appointments continue to be a focus of discontent, but not the first measure to eliminate "parkers" - student who enrol year after year to qualify for government stipends and cheap meals at campus *mensas*.

This year basic tuition fees went up by 20 per cent linked to family incomes. Fees range from a poor person's £25 to £175 sterling for a student whose family income exceeds £8,000 a year.

The innovation most applauded over the last academic year was the change in research and science policy. The government coalition headed by Premier Giovanni Spadolini, a history professor last November awarded a record £2.2bn for scientific research, 42.3 per cent more than the previous research budget. Three quarters of the funds (which are contributed on an almost 50-60 basis by state and industry) have been destined for engineering, physics and chemistry.

A simultaneous policy attempted to eradicate an old Italian evil, clientelism and patronage, whereby favourite people and favourite causes obtain the lion's share of available funds, often for pariah projects. Today the lion's share goes to a few select projects carried out in the pooled resources of a number of universities with an interdisciplinary approach. Most of the projects are tied to the needs of the number

He added wryly: "Still, as long as Italy is in the Common Market nothing can go that bad because we have a standard against which to measure our performance."

Maybe the mass universities, folies of just one decade, have died. But the higher education institutions which are to replace them are still in the cradle, and they might take decades to grow up.

Uli Schmetzer



John Walshe

John Walshe

Günther Kloss



# A struggle to improve a bad reputation

The Greeks are almost superstitious in their belief that a university degree is the golden key to life. This fetishism puts enormous pressure on the country's seven universities and six graduate schools which can barely accommodate more than 15,000 entrants each year out of 100,000 or so candidates. So, about 25,000 more get channelled, often reluctantly, to vocational colleges, while some 10,000 drift to universities abroad.

Greece is the only European country, in fact, with roughly 20 per cent of its student population abroad. The average for other OECD countries is barely 0.75 per cent. Many of those who enrol in foreign universities are promising candidates who are put off by the bad name of Greek universities.

Is this poor reputation deserved? Most experts agree that Greek universities are downgraded by fossilized institutions introduced 50 years ago, as well as by the lack of infrastructure which inhibits research and postgraduate instruction.

The best known fossil is the Chair. The system has encouraged the emergence of Chair professors as autocratic despots, immune from any control who delegate teaching to assistants, while they devote themselves to their private practice which is so enhanced by the professorial title. Nepotism has been rampant.



Past Conservative governments should get credit for substantial educational reforms. However their efforts to solve the problems of higher education have stumbled on the dogmatic obstructionism of radical students who are now so "docile", but also their inability to break up the powerful professorial establishment.

The Socialist Government which took office in October last year, free from those constraints, has pushed through legislation imposing sweeping reforms in the universities.

The almighty Chair has been replaced by the American-style department which diffuses the power of professors. Student participation was introduced at all levels, and research and postgraduate studies were institutionalized. Teaching posts became full-time jobs, precluding private work, and all faculty members must reside where they teach.

One of the great achievements of the 1974-81 Conservative governments in education was the creation of a nationwide network of secondary and tertiary technical-vocational training institutions. However by dividing upper secondary education (lyceas) into grammar and technical, they established a threshold at the age of 15 for a choice that was largely irreversible.

Most Greek children, of course, inspired by following the high road, feeling humiliated and mortified if forced into vocational courses instead. The Socialist Government abolished the 15-plus selection with the aim of making lyceas comprehensive again, offering the chance to choose a direction later.

The Socialists, however, did not quite fulfil their vote-catching campaign promise to do away with the two nerve-racking university examinations at 17 and 18. Most families hoped their children would

under the Socialists, simply walk into any university they wished to attend. What replaced the system, however, CCE A level, that allows for an ultimate assessment based by 25 per cent on performance in the three lyceas classes, and by 75 per cent on examinations in four preparatory subjects, from a selection of four packages taught in the last class, opening the way to 16 different university faculties.

Those who fail will be given unlimited opportunities to improve their marks after attending a special "post-lyceas preparatory centre" which will also be open for those who want to switch from technical college to university. The centres are designed to eliminate the need for costly private cramming that all Greek children feel they must attend to make up for the shortcomings of secondary education.

Critics of the Socialist Government who doubt that the facilities and staff provided for the programme can be secured in time for the coming year, are also vehemently critical of the new legislation on higher education which, they argue, leaves too many backdoors open to state interference in the universities whose independence and autonomy are guaranteed by the constitution.

One novelty that has drawn much fire is the "national academy of letters and sciences" which is to coordinate university courses, postgraduate studies and academic research. At the outset it will consist of 20 distinguished university professors appointed by the government for five years, with a recommendation from the political parties. They will then elect their successors.

There will also be a "national higher education council" chaired by a representative of the minister of education, consisting of the rectors of all universities, government officials, representatives of the political parties, student organizations and other professional bodies. The council will be the government's adviser on the organization and operation of the universities, and will have enormous influence.

The opposition claims that the provisions concerning the two bodies are so vague and ambiguous that they contain the seeds of increased party control on higher education, as part of a wider Socialist scheme to take over all the decision-making centres of the nation and allegedly perpetuate itself in power.

There is no doubt, however, that the Socialist reforms in higher education constitute a serious attempt to modernize the structure of the Greek universities and restore some order out of this fossilized chaos.

The new system ensures student participation in the general assemblies of the departments on a 2:1 ratio in favour of the teaching staff, while the postgraduate assistants will have a 10 per cent participation.

The teaching staff will have four grades and will be elected by teaching staff after hearing the opinion of the students. If the majority is not as high as two thirds, the case will be referred to the department's general assembly which can ratify the election by a simple majority, or remand it to the academy for a final ruling.

Student control of the teaching staff is established by the new law which calls for student-rated teaching ability and research competence reports every semester. The assessment goes into the teacher's record which is kept and updated by the academy.

What causes concern here is that with the application of the law which has already begun, all the members of the auxiliary teaching staff who hold doctorates, are automatically appointed instructors with the prospect of future promotion. Together with the more senior grades, this will mean that 6,000 teaching posts at university level will be occupied, closing the field to new blood for several years.

Every year has witnessed a marked increase in the number of applications for grants, and in the competition for grants; only one ap-

Mario Modiano

# Bright future for cooperation

Upwards of 50 British academics will find a pleasant surprise from Brussels when they return from their vacation. Every year, the Commission of the European Communities provides financial support to projects concerned with the development of degree courses and course units between higher education institutions in Community countries, in the framework of what is known as the "Joint Study Programmes (JSP)" grants scheme. And as in most previous years, British institutions top the list of 1982/3 awards.

The scheme of grants was introduced in the 1976/7 academic year and has given rise to some 269 cooperative programmes, in which 400 institutions of higher education, 1,000 staff members and several thousand students are now participating. The JSP scheme, despite its various shortcomings, is now regarded as a promising instrument for promoting higher education cooperation so far devised at European level.

Certain guidelines are established to define eligibility for support. Preferential treatment is given to programmes comprising a high degree of academic integration; those whereby a whole course is the subject of joint planning are likely to have a better chance of Commission support than ones envisaging the short exchange of a student or two.

To enable institutions to assess the eligibility of a venture, three categories of potential joint programmes have been established: to be eligible cooperation must have as its aim the establishment of arrangements whereby

- a) students are to spend a recognized and integrated part of their course in at least one of the partner institutions in another member state; and/or
- b) a course in each institution area to be taught by staff members from at least one institution from another member state; and/or
- c) courses or parts of courses are to be jointly produced for introduction into the teaching programmes at all the participating institutions, even where no staff or student mobility is involved.

Within each of these groups, however, the types of programme supported vary widely. Thus certain student exchange-based programmes may provide for students to spend half their course abroad and to receive two degree awards, while others may involve mixed groups of students working in situ on joint projects or an exchange of students for shorter periods of time.

Similar distinctions may be made with regard to the staff exchange-based programmes. The financial support from the Community is intended to help cover costs in the initial stages of a programme, and notably its developmental phase.

Travel and subsistence expenses for representatives of institutions to attend meetings; the development and translation of teaching materials; the expansion of a Joint Programme to include additional institutions of higher education; and other expenses involved in developing, evaluating or disseminating information about the programme.

Each year, a number of grants are set aside for the development of new joint programmes. Further support is also available for existing programmes which have already received a grant and have made good progress. The practice is to allocate approximately half the available resources in a given year to new programmes, the other half to "renewal" applications. Maximum awards are normally in the order of £2,200 per annum, or £5,500 per annum for programmes where students or staff travel expenses for the purpose of participating in a project are involved.

A brief statistical review of the scheme reveals the high level of response from institutions of higher education throughout the Community. Every year has witnessed a marked increase in the number of applications received, and in the competition for grants; only one ap-

plication in 2.4 was accepted this year, whereas two out of every three were successful back in 1978. The continuing rise in the number of awards indicates a corresponding reduction in the average amount paid to each project.

Of the 269 joint programmes which have received support, just under half have been based on mobility of students, the other 50 per cent being divided between programmes based on mobility of staff and those involving joint production of course units or teaching materials. Any attempt to categorize joint programmes by subject is bound to be somewhat arbitrary in a scheme where an interdisciplinary, problem- or project-oriented approach to course planning is so much in evidence. Nonetheless, the remarkably broad spread of disciplines which have taken advantage of the Community grants at last provides concrete data to disprove the frequently voiced but often ill-substantiated view that apart from languages and possibly business studies, foreign experience is of little academic value to "undergraduate" students. Thus predominantly language-oriented programmes account for only 31 of the 269 supported so far (under 12%).

The same diversity is reflected in the types of institutions participating. Thus "non-university" type institutions account for over a third of the participants. An important factor here is the high incidence of courses in the non-university sector involving practical experience. It is also worth noting that as far as European cooperation is concerned, collaboration across the binary divide is clearly in evidence. This is particularly true of British polytechnics and colleges, several of which are cooperating with universities in other Community countries.

Two thirds of this year's grants, 62 in all, involve British institutions. Of the many reasons for the high level of British participation which have been advanced, four seem particularly plausible. English is predominantly the first foreign language for the other EEC countries; British institutions have a tradition of requiring or permitting study abroad, in languages but also increasingly in other subject areas too; the distribution of information on grants available is relatively well organized in the UK, with the network of organizations such as the CVCP and CDP providing substantial back-up to the official distribution through the DES; the concept of organized, inter-institutional cooperation is one which is particularly well attuned to the British system of comparatively high-cost structured courses and low staff-student ratios at higher education level.

British institutions are involved in some of the most exciting programmes so far launched with Community support. This is particularly true of cooperative arrangements whereby entire degree courses are planned and provided jointly by institutions in more than one Community country, and at the end of which successful candidates receive the fully validated degree awards from both (or all) institutions. In the UK, for example, a CNAAB (honours) programme.

The grants available are awarded to institutions to facilitate the organization and planning of projects the maintenance of which, once that planning stage has been completed, is the responsibility of the institutions concerned. True, in the last two years, the purposes for which grants may be awarded have been extended to include student and staff costs incurred in actually operating a programme in its early stages.

Nonetheless, the budget available for the scheme is such that substantial institutional support for operational activities of a large number of projects is precluded. Given the prevailing economic constraints, it might therefore be assumed that a high proportion of the programmes initiated with the support of the Commission would be doomed to immediate failure once that support ceased.

Happily, a survey carried out by the Institute of Education in 1980 does not fully substantiate these fears, for in response to the Institute's questionnaire, between two thirds and three quarters of programmes supported between 1976/7 and 1978/9 reported they were at that time "operational" to a full or substantial extent, and even where this was not the case, it was felt that the experience which the Commission support had made possible of interacting with partners elsewhere in the Community, had constituted a significant academic enrichment to the departments concerned.

Times change, however, and there can be little doubt that the budgetary cuts which have been introduced in the higher education sector in the past two or three years have been of an order of magnitude which cannot fail to jeopardize the case of a very substantial number of the joint programmes introduced with Community - and national - support since the scheme began. In this situation, the call is therefore for considerably increased budgetary allocations to the Joint Study Programmes scheme if the latter is to realize its full potential.

It is therefore of important that the council and ministers of education of the ten, meeting in Brussels on May 24, underlined the importance which they attached to the development of the scheme, as a means of solving problems of academic mobility in the Community. At the end of their discussion, ministers agreed that:

- Member states and the Commission should build on the experience acquired from the JSP scheme to foster direct agreements between universities and higher education institutions in other member states;
- The Community should develop and extend the JSP scheme and disseminate as widely as possible information about its results, particularly with regard to academic recognition;
- Member states should support the JSP programme by encouraging institutions to participate in the scheme, particularly where projects involving mutual recognition are under development;
- more information should be obtained and exchanged on the career implications of study carried out and qualifications obtained abroad;
- other practical measures should be considered for the purpose of increasing student mobility, notably a further study of the social and material situation of students undertaking study abroad.

Already, a number of measures to ensure improved dissemination of information on the results obtained under the scheme have been introduced. At the Commission's request, the Office for Cooperation in Education has begun a series of national information seminars (Bonn, Dublin, Milan and Odense have been the first four venues over the past 18 months).

Thus a seminar organized by the Business Education Teachers Association (BETA) at the University of Paderborn in Germany earlier this year in which a large number of joint study programme directors in the business education field took part, received Commission support, and "information packages" containing details of each joint programme supported in selected subject areas are also under preparation, initially in the fields of business studies, engineering and teacher education. The first number of a newsletter, entitled *Delta*, designed to keep all Community-supported projects in touch has just appeared.

Much remains to be done to improve the scheme still further in the years ahead. As far as British higher education is concerned, however, there is already considerable cause for satisfaction with achievements to date.

Alan Smith

The author is director of the Brussels Office of the European Institute of Education.

# BOOKS

EDUCATION

## Proud legacy

Controls and Conflicts in Welsh Secondary Education 1889-1944 by Gareth Wyn Jones University of Wales Press, £14.95 ISBN 0 7083 0814 7

Secondary education has been a crucial motor of change in the history of twentieth century Wales. The role of the "county" or grammar schools in promoting social mobility and occupational diversity has been more central in the modern experience of the Welsh people than for any other part of Britain.

Indeed, the Welsh have long flattered themselves that the grammar schools, and the legacy bequeathed to their comprehensive successors, have symbolized a unique commitment to educational excellence, far superior to that shown by their English neighbours. It has, therefore, been particularly disillusioning for the Welsh to hear recent criticisms of the inadequacies of their secondary schools in academic attainment. Along with political disappointment and economic decline, this has increasingly thrown the *clawdd* of the Welsh as a community and a nation open to doubt.

These paradoxes are notably illuminated by Gareth Jones's valuable new monograph. The work of an able young Swansea historian, who has already written with distinction on the Tudor period, it is a major contribution to educational and to social history. It will be read with profit by anyone concerned with the growth of the British educational system in Wales and beyond.

Kenneth O. Morgan

Kenneth O. Morgan is a fellow of Queen's College, Oxford. His most recent book 'Robbin of a Nation: Wales, 1880 - 1980' was published in 1981.

## Religious problems

Trinity College Dublin 1592-1952: an academic history by R. B. McDowell and D. A. Webb Cambridge University Press, £35.00 ISBN 0 521 23931 1

The historiography of universities is flourishing. Following recent excellent histories of the universities of Hull and Liverpool we now have a monumental study of Trinity College Dublin written jointly by an arts and a science professor of the college.

By 1590 royal control in Ireland had sufficiently consolidated to enable the founding of a college in the emergent capital of Dublin. This was to serve two purposes: it would obviate the need to send native youth to England, and, more important, it was to be a bastion of a Catholic land. R. B. McDowell and D. A. Webb move swiftly through the college's first two centuries where despite many vicissitudes the college remained firm to its purpose of "orderly rule in the Protestant interest". Among the threats it survived were a Laudian High Church reaction in the 1630s, rebellion and plague in the 1640s and 1650s, attempts at gross interference by James II and occupation as a barracks by Jacobite troops in 1689.

With the accession of William III, however, it settled into a longer period of calm as a leading institution of Whig dominance. In the nineteenth century, moreover, the college acquired a good deal of college acquired a good deal of fashionable style. The Front Square was rebuilt, the medical school established and gentlemanly pursuits of riding and fencing encouraged. Its two provosts between 1758 and 1794, Andrews and Holy Hutchinson, were no scholars but high society men of affairs, lawyers and politicians. Academic standards remained low however; it was not until the 1790s that teachers with any aptitude for their subjects were appointed as professors of mathematics and Greek.

It was from the 1830s and 1840s that Trinity College Dublin began to reform in more modern directions - a chair of engineering, the division into pass and honours degrees, more specialized tutorial teaching, the re-education of the college rule for fellows, the transformation of the law professorship into an effective teaching post and great advances in the medical school. About one third of

graduates became clergymen. Accordingly when Trinity was investigated by a Royal Commission along with Oxford and Cambridge in the early 1850s, it was found to be relatively satisfactory. But the status of the college was always affected by the special Irish religious problems. The Irish Church was disestablished in 1869; by the Fawcett Act of 1873 no religious test was required for any post at the college and in practice Catholics were 10 per cent of the student body. This diminished, not because of college policies but because of the attitude of the hierarchy which disapproved of "Trinity Catholics" attending the college. Finally the "Irish Universities Question" was resolved by the Irish Universities Act of 1908 which created the modern pattern of the Queen's University Belfast, Trinity College Dublin, and the National University (with Catholic colleges in Dublin, Cork and Galway).

The story of Trinity College Dublin inevitably prompts comparison with the English universities. It must be said at once that in the past the level of performance seemed comparatively low. While TCD never sank to the abysmal levels of Oxford and Cambridge in the eighteenth century, it did not produce the world-ranking scholars of the English universities - with the exception of Berkeley who was there 1707-13 unrecognized and undisciplined. McDowell and Webb are frank about the low quality of staff at some periods, as if the rigours of the fellowship examinations exhausted many for the rest of their idle careers. Unlike English universities, the college did not attract industrial patronage. Lord Iveagh of Guinness responded to the financial appeal of 1903 but the relative disengagement of Trinity College and industry (together with the lack of the college of funds and stimulation. It also lacked the stimulus of war which had such vitalizing effects on the English universities. Trinity College's research contributed little in the First World War, and Ireland was, of course, neutral in the Second. The most important difference is that Trinity has had to respond to political events and pressures which its English counterparts have been spared - a purge following the rising of the United Irishmen in 1798, for example, and a minor fortified siege during the 1916 rising.

Finally we easily forget that in the last century TCD was much more a part of English education. A quarter of its students were "outschool boys" and many of their Irish students were products of English public schools. This book is an imposing achievement. It is well written and especially perceptive and sensitive in its descriptions of personalities. The history contributes significantly to that awareness of Irish similarities, differences and issues of which insular Englishmen stand in need.

Michael Sanderson

Michael Sanderson is senior lecturer in economic and social history at the University of East Anglia.

# BOOKS

EDUCATION

## Disillusioned final comment on the Edwardian high noon.

Caroth Jones's admirably full and lucid study, based largely on the voluminous files of the Board of Education in the Public Record Office, enables us to strike a balance sheet. At one level, this is a tale of constant bickering, with conflicts galore, within and without the system. Dr Jones is particularly good on the role of a variety of pressure-groups, the Labour party, the unions, the churches, representatives of teachers and parents, a confusion of impulses within the bureaucratic machine.

Another factor from 1920 onwards was the effort to secure a distinctively Welsh educational structure, with greater recognition for the Welsh language as a dynamic element in the teaching system. Here again, the impression left is one of comparative failure, until the Welsh schools campaign of the past fifteen years.

On the other hand, without the thrust from the grammar schools, many of the achievements of the Welsh national movement in the present century would have been inconceivable. They provided leadership and a secure hierarchy of values. Even in a very different generation, the Welsh grammar schools of the pre-Butler era retain a proud place in educational history. It is well to be reminded now, at a time of encroaching uncertainty and turmoil, of the glorious saga of former pioneers.

Kenneth O. Morgan

Kenneth O. Morgan is a fellow of Queen's College, Oxford. His most recent book 'Robbin of a Nation: Wales, 1880 - 1980' was published in 1981.

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## BOOKS

EDUCATION

### Seeing both sides

Philosophical Issues in Education  
by John Kleinig  
Croom Helm, £12.95 and £5.95  
ISBN 0 7099 1517 9 and 1518 7

John Kleinig states that *Philosophical Issues in Education* is a textbook for use in philosophy of education courses. It is organized, as so many of these have been, as an examination of a series of topics likely to be of focal concern to those engaged, at whatever stage in their careers, in reflecting on the aims and procedures of education. But there ends its similarity with previous textbooks in the field.

Although philosophical discussion of educational issues has grown increasingly sophisticated over the past two decades, textbooks have remained introductory and low-level, aimed largely at indicating the broad outlines of problematic areas for students on short courses in initial training. Kleinig's book represents a coming of age for philosophy of education as a field of study, offering serious students a thorough survey, synthesis and critique of specialist work done by a wide range of philosophers of education on 20 chosen topics. His attempt to provide readers not only with a fresh insight into the topics under discussion, but also with a synoptic view of the significant work previously done in the field is the source of the book's many strengths and its occasional weakness.

While clearly aware of its drawbacks, Kleinig opts for the topic approach on the grounds of its pedagogical advantage in beginning "at the level at which people express their puzzlement". This being so, it is most successful in dealing with areas generally found puzzling, such as "intelligence", "equality", "competition", and so on. It is rather less so when focusing on the concepts of "teaching" or "indoctrination". One suspects that the space devoted to these and related analyses is a function of their prominence in early writings in the philosophy of education. However, the range of topics treated is broad, and includes several to which insufficient attention has been paid. Where the ground is well-trodden, Kleinig always has further insights to offer, so that this book is valuable not only to the serious advanced student, but is also of considerable interest to specialists.

Kleinig's chosen method of approach is to refine and utilize the clarity developed in earlier conceptual analyses related to each area examined, without falling into academic sterility or beguiling fundamental questions by offering in favour of the linguistically sanctioned status quo. Though no relativist, he emphasizes that conceptualization necessarily takes place in a social and historical context, and that consciousness of this fact points up the prescriptive limitations of analysis. He is adept at throwing fresh light on analyses which through familiarity have become the standard stock-in-trade of philosophy of education and at questioning the supposedly fundamental nature of traditionally "basic" arguments. The chapter on equality accordingly casts serious doubt on the generally accepted presumption in favour of the principle, and the chapter on authority could be read with profit by many who have delivered lectures on "authority" in simplified schema for so long that their thinking has become stereotyped. He thus carries off the difficult task of maintaining a high standard of academic rigour without ceasing to be stimulating and often provocative.

Throughout his book Kleinig resists the philosopher's temptation to demolish arguments he considers flawed, and the education spe-

cialists temptation to present students with an evaluation of individual analyses in isolation from their scholarly context. Thus R. S. Peters' analysis of education and P. H. Hirst's work on the forms of knowledge are presented neither as the tablets of Moses nor as inadequate answers to practical problems, but as seminal contributions to an unfinished debate.

Perhaps the greatest strength of this book is Kleinig's sensitivity to the complexity of the issues involved in discussions of education for a rapidly changing society, and to the real and justified disquiet about contemporary practice which finds expression in the writings of radicals and deschoolers. Too often philosophers have dismissed the radical critique by exposing the glaring illogic and inconsistencies of the arguments in which it is expressed, leaving students with the lingering suspicion that something has been sacrificed to mere cleverness. Kleinig avoids this, and whether he is considering children's rights or religious education, he refuses to dismiss a groundswell of feeling by merely demolishing the inadequate arguments popularly associated with its defence.

There is no padding in this book, nor is there any attempt to draw together the separate issues to make

### Rethinking a radical approach

Teacher Learning  
edited by Gwyneth Dow  
Routledge & Kegan Paul, £5.95  
ISBN 0 7100 9020 X  
A Review of Research in  
Teacher Education  
by E. C. Wragg  
NFER-Nelson, £3.95  
ISBN 0 85633 247 X

Here are two books, one on "teacher education", the other on "teacher learning", which could not be more different. Ted Wragg's *A Review of Research in Teacher Education* bears the mark of the computer print-out which gave rise to the first 500 references on which he bases his review. Gwyneth Dow has produced a volume which addresses important problems in a lively, readable manner; with the help of advice from John Eggleston she has developed a structure that unites the efforts of six contributors in a novel and interesting way.

*Teacher Learning* is one of a new generation of books and articles which is attempting to build a new radicalism from the ruins of progressive education. It derives from the experiences of six Australian educators who were involved in a centralized and sustained attempt by the State of Victoria to reform its State secondary school curriculum and give schools a new autonomy in deciding what and how they would teach. Starting with the Curriculum Advisory Board in 1966 Victoria has encouraged school-based innovation by setting up the Victoria Institute of Secondary Education. This allows schools to submit their own syllabuses for a large proportion of accredited sixth-form work. In addition there are no external examinations at 16-plus. Clearly this framework gives room for teacher initiatives in curriculum and pedagogy unheard of in this country where the constraints of the examination system reduce most teaching after the second year at secondary school to intensively coached instruction.

The ideas within the book are introduced through the medium of the experiences of an imaginary teacher, Maria, who is of mixed ethnic background and teaches in a comprehensive community school in an ethnically diverse urban area in Australia. The real for teachers in Britain or North America as they are for her. Each chapter of the book takes an educational problem and discusses its general features before setting it within the particular context of Maria's school. As a device for uniting what would otherwise be a

piecemeal, rather diverse selection of topics, I think it succeeds. It also enlivens the presentation and makes the general relate to the specific.

The subjects selected include topic-centred teaching, curriculum development, the multicultural school and the core curriculum. The chapters are sensibly critical and constructive rather than revolutionary. For example Barnes and Dow look sensibly at topic-centred teaching. They convincingly expose the futility of integrating subjects for the sake of integration, so that "a topic involves only the work which the subject matter warrants". They expose the weakness of many topic designs which retreat from important controversial issues and force human affairs into "objective/scientific" frameworks devoid of meaning.

The authors of the chapters vary in the degree to which they are able to integrate Maria into the subject under discussion. At times the text becomes narrowly prescriptive and almost "cook book" in its approach. On other occasions Maria is used to sidestep large issues with important ramifications for the argument being presented. Nevertheless the book manages to retain its purpose. The task of rethinking a radical approach to education goes on within its pages.

It is difficult to be fair in one's criticism of Ted Wragg's review of research. It was originally written as a report commissioned by the Social Science Research Council and this might have imposed requirements on the author (deadlines, definition of task, and so on) which have damaged the outcome. The book is in fact a list of research projects, each reported with a few sentences about the findings. For example, we learn that "Fink (1976) used diaries, questionnaires and observations of 29 student teachers in Baltimore during their ten-week teaching practice". We learn that she found that the teachers became more "custodial". Each page typically contains a description of three or four such studies and the book is organized under six classificatory headings, for example, "surveys of research" and "teaching practice".

As a review it tells one very little. There is no theoretical discussion of issues, no methodological or professional appraisal or evaluation of any of the studies and no criteria spelled out for the omission or inclusion of studies. The recommendations for further research are listed at the end of the text but they are not derived from it in any recognizable way. Unfortunately the bibliography is not indexed. This means that the reader cannot easily find a named author. The book will, however, be useful as a first point of reference in education libraries.

Colin Lacey

Colin Lacey

Colin Lacey is professor of education at the University of Sussex.

## BOOKS

EDUCATION

### The right to know

Out in the Open? The school records debate  
by Lucy Hodges  
Writers and Readers, £4.95  
and £2.50  
ISBN 0 906495 58 X  
Calling Education to Account  
edited by Robert McCormick  
Heinemann Educational for the  
Open University Press, £6.50  
ISBN 0 435 80629 X

If, as Ralph Nader put it, "information is power", communicating that information establishes it with an authority which may bear no resemblance to the significance of the original.

*Out in the Open?* and *Calling Education to Account* are two books, different in purpose and in style, which nevertheless share a common preoccupation with the nature and effects of communications about schooling. While Lucy Hodges is concerned with school recording and reporting about individual pupils, Robert McCormick's reader is about the school's recording and reporting about itself. Taken together, the two books offer an interesting paradox.

The professional concern to open up the school to external and self-scrutiny as the basis of institutional accountability found in *Calling Education to Account* contrasts sharply with Hodges's monograph in which teachers' professionalism takes the form of a fierce defence of the confidentiality of individual records.

*Out in the Open?* is a timely and succinct exploration of this confidentiality issue. Hodges explores some of the characteristics of pupil records and the more or less justified fears which have led to the growing pressure for greater public, particularly parental, access to them. The book describes the conduct of the campaign in this country, the reaction of local authorities and teachers, and the outcome of the earlier and more violent struggle waged by university students. Comparison is made with the tradition of confidentiality in other professions thereby opening up much more general issues, such as the computer storage of personal data and the confidentiality of all kinds of public records.

In a useful chapter on experience in other countries such as the USA, Sweden and Australia, Hodges shows how Britain's lack of public concern about the collection and storage of data on individuals is reflected in our lagging far behind most other western countries in the general field of "subject" access to data, whether on computer or not. Certainly it is initially surprising to find a tightly bureaucratic and centralized - not to say elitist - country like France having made far more wide-reaching reforms in providing for access to all kinds of record including school records, than Britain. In fact it is just that characteristic tradition of an informal working consensus between teachers, local authorities and parents in a highly decentralized education system like our own which has hitherto tended to encourage a considerable degree of trust between parents and teachers in this country.

The growing access lobby which Hodges describes must be understood as part of the contemporary accountability movement, itself a manifestation of the tendency to scapegoat teachers in recent years. In this sense the 1977 Taylor report represented a watershed in the parents' rights lobby. It is not so much the relatively rare, blatantly wrong report that is a cause for concern - Hodges are disturbing - as the all too common inadequacy of reports in which one meaningless or derogatory word or phrase is used to sum up a child's progress for the whole year. The government has recently ruled explicitly on this issue arguing that professional confidentiality is in the

interests of the pupil since without it reports would become hopelessly bland. The result, according to the access lobby, is that teachers are awarded professional inviolability while lacking the strictures of the formal code of other professions. They are thus accountable to no one for the information they write and are quite free to pass such material to outsiders.

This autonomy compares strangely with the elaborate and painstaking provision for various forms of individual and institutional self-examination and accountability described in *Calling Education to Account*. Although mostly extracts of previously published work, the reader includes several excellent new articles - notably those by Robert Wood and Caroline Gipps and by John Pearce on local authority monitoring and by Lawrence Stenhouse on the use of case-study research. As such it provides a comprehensive coverage of the principal issues which have characterized the accountability movement in this country.

The sophistication of thought and techniques now evident in the pursuit of accountability in education has led to a widespread acceptance among schools of the need for careful and

detailed reporting and scrutiny. Paradoxically it is perhaps this same preoccupation with accountability which has encouraged a greater confidence among teachers in their role as self-accounting professionals and hence in their duty to make "professional" judgments. The current trend in this country towards "profiles" and continuous school records, particularly for the "less able" seems likely to develop, as it has in France, into an "orientation" process in which teachers play a crucial directive role in course choice. If it does, the failure to include individual pupil records within the aegis of the school's overall accountability is likely to present many future pupils and parents with an educational fate they can neither understand nor resist.

The more formal or contractual aspects of accountability are still confined, however, to institutional issues. Widening public access to individual, as well as institutional records, would greatly strengthen the school's claim to be accountable.

Patricia Broadfoot

Patricia Broadfoot is lecturer in education at the University of Bristol.

### Special needs

The Education of Deaf Children: issues, theory and practice  
by Stephen P. Quigley and Robert E. Kretschmer  
Edward Arnold, £9.50  
ISBN 0 7131 6353 4

Integration in Action: case studies in the integration of pupils with special needs  
by Seamus Hegarty, Keith Pocklington and Dorothy Lucas  
NFER-Nelson, £10.95  
ISBN 0 85633 238 0

The Early Years  
by Maurice Chazan and Alice Laing  
Open University Press, £11.95  
and £4.95  
ISBN 0 335 10050 3 and 10052 X

These three books are concerned with the education of children with special needs. Stephen Quigley and Robert Kretschmer provide a scholarly and substantial account of the education of deaf children in American schools. Seamus Hegarty, Keith Pocklington and Dorothy Lucas report on integration of children with learning difficulties, physical handicaps, hearing impairments, visual impairments and communication disorders in ordinary schools, and Maurice Chazan and Alice Laing consider the situation of very young children with a variety of handicaps.

Quigley and Kretschmer have provided a concise and plainly written account of the difficulties that deaf and partially deaf children have to surmount in their acquisition of basic educational skills and in their acquisition of social competencies and satisfactory personal adjustments. They draw on research studies to support their recommendations - recommending that their arguments - research which, with very few exceptions, does not include British work. They are quite clear about the goal of educational processes for deaf children - it is primarily to promote "the establishment of an easy and fluent system of communication that can be internalized as a language foundation on which secondary language systems of reading and writing can be developed."

This they repeatedly emphasize, and it is deaf children's achievement of this goal which represents the touchstone of success in educational provision for them.

We might wish that Hegarty, Pocklington and Lucas were as rigorous in formulating and reporting criteria for success in the programmes of integration they studied. They repeat, with tedious regularity, their examination of these "case studies" describing antecedent events which led schools to embark on the programmes, the pupils involved in them, the pupil-staff ratios, accommodation, curriculum, the amount of social and academic integration achieved and parents' and teachers' views of the programmes. They do not, alas, in-

clude the handicapped children's views of the integration processes. While they report favourably on the effective social integration of the handicapped children, there is a noticeable silence about their academic progress. It is true that in all the programmes but two the authors describe how the monitoring of the children's progress was done, but they do not present the 12 reported to be any reasonable data on the children's academic progress. For the most part we have only rather general comments from staff and parents on improvements noticed.

Reassurance that children with, for example, learning difficulties seemed happy in the ordinary school to which units were attached, that they were not teased, that the main school staff were sensitive to their difficulties, that a flexible timetable allowed for individual learning - all this is good news. But it is not enough. Studies of integration must demonstrate that successful academic learning accelerated as much in the integrated situation as in the segregated.

Nor do the authors provide any information about the fortunes of that perplexing category of handicapped children, the maladjusted. It seems odd that while the advantages of integration for the most recently recognized category of handicapped pupils - the ESN (5) - attract attention, there is a continuing silence about integrating a category of handicapped children recognized as such since 1945.

In Chazan and Laing's lively book, one of the clearest messages to emerge is the need to approach the parent of handicapped children with sensitivity and honesty. "Parents as Partners" is a good slogan, but is not as simple as that. Parents beset with anxieties about their child and unaware of normal patterns of child development, are not able, as the authors demonstrate, to take advantage of the potentiality of this partnership without the knowledge that teachers and other professionals supply.

It is a pity that Chazan and Laing do not expand on the meaning of "special needs." They refer to Kellmer Pringle's well-known description of the needs of all children, and then list handicapped children's difficulties. But difficulties and special needs are not the same. What is special about the needs of handicapped children is not so much their difference from the needs of all children, but their unmet needs, or needs which call for a special response. If we now begin to think about a minority of children as if their needs were significantly different from the needs of all children, we may, despite our good intentions, fall into the same kind of error that has for so long led us to dwell on the division between the handicapped and the non-handicapped.

Robert Laslett

Robert Laslett is lecturer in education at the University of Birmingham.

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**BOOKS**  
 EDUCATION

**Costs and benefits**

The Economics of Educational Media by Leslie Wagner  
 Macmillan, £20.00  
 ISBN 0 333 31690 8

This is a balanced defence of the value of economic analysis of media in education (principally radio, television, film and computers). While the tone of the book is generally favourable to the new educational media, Leslie Wagner nevertheless acknowledges that the enthusiasm of the 1960s for the new gadgetry has now given way to a certain measure of disillusionment. In part, this is because the initial costs of media instructional systems were frequently underestimated, while student demand was frequently overestimated. In addition, hardware tended constantly to outstrip "software", by which is meant not just the preparation of materials but also

the training of teachers to make effective use of hardware, not to mention maintenance of equipment in good working order. For the rest, however, the new pessimism about educational media is simply a reflection of the recent disaffection with education itself. Nevertheless, the imperatives of rising educational costs will make new instructional media ever more attractive in the future. The question of educational media is with us to stay.

In the circumstances, there is as much need as ever to establish appropriate methods and techniques for evaluating media proposals. Economic analysis provides those methods and techniques in that it can furnish a framework which identifies and measures all the costs and benefits of a media decision. In practice, however, economists have typically concentrated on the costs side of the equation and have left the evaluation of benefits to others, notably educational psychologists. That this is an unsatisfactory arrangement is made clear in an excellent chapter on the identification and measurement of educational outcomes. Educational psychologists, on the other hand, have evaluated educational media largely in terms of their benefits, while neglecting or altogether ignoring costs. Indeed, of the four hundred or so existing evaluation studies of educational media all but a handful study either cost or benefit streams but never both in terms of

benefits per unit of student costs. Wagner's book begins with a rather muddled discussion of the general principles involved in media choice, followed by a lucid discussion of a chapter on measuring educational achievement, and a section on the pioneering work of Dean Jamison. This leads into a detailed review of five continuing media projects: the Open University in the UK (reflecting the author's own work on the OU, which, incidentally, exemplifies the tendency to overemphasize cost at the expense of the benefits); the video-tape instructional system SURGE at Colorado State University; the computer-assisted instructional system PLATO at the University of Illinois; the Telescondaria project for secondary education in Mexico; and the Radio Mathematics Project in Nicaragua. More attention to Asia and Africa, where media projects in education are now proliferating, would have been welcome. A final chapter draws the strands together in a cautious but affirmative conclusion.

This is the first book by an economist on educational media that can be recommended to undergraduates.

**Mark Blaug**  
 Mark Blaug is professor of the economics of education at the Institute of Education, London.

**Teaching physics**

The Education and Training of Physics Teachers Worldwide: a survey edited by Brian Davies  
 John Murray, £4.95  
 ISBN 0 7195 3922 6

To visit another country is to find that everything is the same but yet different: coffee is still coffee but comes in different sized cups and flavours; the police are still the police but seem to work on different assumptions; foods having the same names differ radically, but foods having different names are the same. It is precisely so in education.

We can ask whether or not all teachers in secondary schools are graduates and even get an answer, but what does the answer mean? We can find out how many hours, for how many years, of physics go into training a physics teacher, but what happens in those hours? How does it come about that Hungarian physics teachers are so often female and very clever? How do we tell the difference in South America between the products of state and private universities? How do we assess the essential component of Marxist-Leninist theory in the education of physics teachers in the USSR?

It is for these kinds of reasons that I find Brian Davies's painstaking compilation a puzzling book. Not because its facts are unclear, for they are not, and he has both taken care to collect them from knowledgeable sources in 33 countries and to present them in very informative uniform diagrams. Not because its facts are trivial, for again they are not: they show the impact of differing lengths of university courses, of the various types of training structure, or the differing school experience of physics students.

My puzzle is what to make of it all. The book does not, nor does it claim to, and perhaps it could not, convey those essential differences, like the flavour of coffee or the attitude of the police, which make all the difference. The correspondent from Mexico mentions their 30 per cent illiteracy rate (the Brazilian does not mention the higher rate there) but neither sees it, or other such factors, as vital to knowing what training someone to teach physics to children should be doing, learning, or thinking about. The socialist countries in the survey mention the importance of social or political education, but what difference that makes to science teaching (in a country where the political system claims to be scientific) never shows through.

We should not, however, complain

too much. The book is a modest, and at a factual level, valuable product of the little known private organization GIREP (Groupe Internationale de Recherche sur l'Enseignement de la Physique) which has, almost entirely through the efforts of a few individuals, built up during the past 15 years an international network of people interested in physics teaching and determined to improve it.

**John Ogborn**  
 John Ogborn is reader in physics at Chelsea College, London, and joint-organizer of the Nuffield A-level physics project.

**Key sequences**

The Creative Use of Calculators by J. P. Killingbeck  
 Penguin, £1.95  
 ISBN 0 1402 2336 3

With prices of calculators still falling, it is easy to spend more than the cost of your machine on books about using it. Since there is always an instruction manual supplied, why is it necessary or desirable to buy any other books? Dr Killingbeck's book, about the learning and teaching of mathematics; so we expect - and we get - something with a mathematical challenge for the reader.

First, a few criticisms. As with all books aimed at a wide readership there are difficulties about the level at which to "pitch" the text. The reader who needs the rapid revision of decimals and exponents with which chapter one opens will find the later chapters hard going. And how "everyday" are some of the calculations of chapter two - unless you are a teacher or someone who regularly uses mathematics? As always in mathematics, there is a cumulative aspect to consider: enjoyment and success with the later parts depends on working carefully - using a calculator - through the earlier sections. More seriously, the many "key-sequences" throughout the book do not always give the intended result: I have three calculators each of which gives a different result from the key-sequence in line four of page 48. So, dipping into the book has its dangers.

However, this last criticism can, in fact, be seen differently - almost as a justification of the book itself. For effectively that, far from undermining the mathematical knowledge of children (and adults), the calculator forces us to think about mathematics.

Unthinking following of a routine, whether of a standard pencil-and-paper algorithm, or of a key-sequence for a calculator, leads, sooner or later, to nonsense. By replacing the tedium and slowness of standard calculating methods and aids with a rapid, accurate and simple to use device, the calculator frees us to think about the mathematics and concentrate our attention on the meanings of the operations which it performs for us.

Despite the criticisms above, there is much to interest, stimulate and challenge anyone with an interest in mathematics. It is teachers, however, who will find it of most value. There are many ideas to enrich the teaching of mathematics. Some sections suggest alternative ways to study familiar topics (for example, compound interest, differentiation); others, ways in which a routine piece of work can be enlivened and seen afresh or extended (cube roots from square roots, recurring decimals); others point to changes in the school curriculum which are suggested by the calculator. Some of the formulae given in the book provide excellent opportunities to ask "Why does it work?" and set pupils off on an investigation.

Teachers should study this book. They will need to develop the ideas it contains to translate them into classroom material, but that should not be too difficult; finding the ideas is the difficult task and there are many here ready to be used.

**John Hersee**  
 John Hersee is executive director of the School Mathematics Project, Westfield College, London.

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**NOTICE BOARD**

**Forthcoming Events**

A one-day conference on further education and employment for young people with special needs, on Oct 25 will launch the final report of a three-year original Greater London-Governing Council project. Details and registration for GLAD, 1 Thorpe Close, Labrook Grove, London W10 5XJ.

South West London College (counselling section, management studies department) are again offering an evening course on becoming a self-managed learner. Designed for any 16-year-old or others, who are interested in theory, work, or others, who are looking towards autonomous and co-operative learning. Particulars will be encouraged by using tapes and films on Tuesdays in Beckham Ry. Details from Bridget Proctor, 4 Ducks Walk Twickenham, Middlesex. TW1 2DD.

The Certified Accounting Educational Trust is presenting three courses in the autumn for post-graduate specialists. They are: Accounting and Property and Estate Managers, October 13; Introducing Financial Accounting, October 5 and November 3; Introducing management accounting, October 6 and November 3. All courses are being held in Central London. They have been designed specially for non-accounting staff to give a basic understanding of accounting and finance. Details from Sandra Phillips on 01-242 6855, ext 252.

"Youth, leisure and unemployment", November 20. A Leisure Studies Association seminar on aspects of regional recreation strategy. Details from Oliver Leaman, Liverpool Polytechnic, Barkhill Road, L17 6BD

James Joyce, a centenary celebration in the Goldsmiths' Theatre. The London School of Hygiene and Tropical Medicine, Keppel Street, Gower Street, London WC1. Mondays October 25 - November 29 1982, 6.15 - 7.45. Fee £8.00 for six lectures, £1.25 each. Inquiries to Miss Winifred Bamforth and Mrs Mary Wood, Special Courses Section, Department of Extramural Studies, 26 Russell Square, London WC1B.

"How to Prepare Marketing Plans? A Cranfield seminar for chief executives, directors and senior managers on September 27 and 28. Some of the objectives: to isolate the external and internal factors critical to company success, identify market-centred opportunities, set realistic objectives and devise strategies to achieve objectives, the fee is £225. Inquiries to Mrs J. S. Lyons, seminar administrator, Cranfield School of Management, Cranfield, Bedford MK43 0AL.

Forthcoming Marketing Planning Seminars for Directors and Senior Management are planned on the following dates: November 10 and 11 1982; February 7 and 8 1983, March 28 and 29 1983, June 13 and 14 1983 (contact Malcolm McDonald at Cranfield for further information.)



Members of the Mivvy Mime Company feel a left Charlie... and a left Charlie... and a middle Charlie. Graciela Gil, Graham Allum and Linda Coggin sport their Charlie Chaplin outfits for a favourite sketch. The trio are all pupils of Ronald Wilson's Mime classes at the City Literary Institute's Mime School in London, and formed their group last year. They are now touring with their first production called 'The condition'.

Adult Education, University of Leicester, Leicester LE1 7RH. . . .

Student Management, Coombe Lodge Study Conference Wednesday 27 - Saturday October 30. Student management provides a perspective of college learning systems based on a review of student experience. This includes links student activity with the formal procedures of the department and the college. Some of the topics: student selection and induction; monitoring and recording academic and personal development of individual students; the nature and consequences of the contract between college and student. Fee £45.00. Details from The Registrar and Clerk to the Governors, the Further Education Staff College, Coombe Lodge, Blagdon, Bristol, BS18 6RG.

Noticeboard is compiled by Patricia Santinelli and Mila Goldie

**Chairs**

Professor Doreen Mawrey, previously principal scientific officer at the Centre for Environmental Studies and since 1980 senior research fellow at the London School of Economics has been appointed to the chair of geography at The Open University.

Professor Philip H. Peill, currently professor of equity and a former prov vice-chancellor at the University of Bristol, has been appointed to the chair of equity in the school of law, at the University College at Buckingham.

**Overseas**

Professor Ray Maclean, professor of science education at the University of London, has been appointed to the chair of history at the University of Sussex.

Professor Geoffrey Ubbink, of the department of zoology, has been given leave of absence, initially for two years from October 1, 1982 to take up a position at Tufts University, Boston, where he will help to establish a new school of veterinary medicine.

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The Professional Qualifying Examination and Membership Regulations (PQER) 1982 (1.30) which gives information about the course of study available various ways in which persons may meet the educational standards for professional membership of the institute. Particulars of the syllabuses of the qualifying examination and information in connection with post-qualifying education in transport are also given. Available from The Chartered Institute of Transport, 80 Portland Place, London W1N 4EP.

**Appointments**

Heriot-Watt University  
 Professor John L. Gilbert, professor of pharmaceutical chemistry at Heriot-Watt University, Edinburgh has been appointed head of the department of pharmacy.  
 Professor John Rorke, professor of design and manufacturing, has been appointed head of the department of mechanical engineering.  
 Dr Philip J. Welham, senior lecturer in the department of economics and currently dean of the faculty of economics has been appointed head of economics, in succession to Professor Donald I. McKay.

**Open University programmes September 18 to September 24**

**Saturday September 18**  
 23.00 Open Form - 30 (prog 29)  
 23.40 Musical Differentiation of Applied Maths. Shallow Water Waves (M21); prog 21.  
 24.00 Elements of Music Recognising Structures (A24); prog 15.  
 08.20 Medicine and Applied Calculus Rostang (F24); prog 15.  
 08.30 Tourism (MS72); prog 7.

7.38 Technology Foundation Course Technology in the past (T01); prog 19.  
 23.20 Contemporary Issues in Education 'An 2025 Part 1: Modern Methods (E24); prog 15.  
 23.40 The Augustan Age: Calves of the Past (A24); prog 15.  
 08.00 Introduction to Social Science (S24); prog 15.  
 08.30 Schooling and Society French Universities on Strike (2) (E24); prog 15.  
 08.40 Cognitive Development Language and Thinking from birth to adolescence: The Psychologist in the Playground (E24); prog 19.

8.00 Ethnic Minorities and Community Relations. Immigration, Development (E24); prog 15.  
 7.18 Computing and Computers Coping with Change (M21); prog 15.  
 7.30 The Enlightenment, French 18th Century Art - in Public and Criticism (A24); prog 30

6.40 The Enlightenment. The Paris Pantheon (A24); prog 15.  
 7.05 Mathematical Models and Methods. Fourier Analysis (M21); prog 15.  
 7.30 The 19th Century Novel and its Legacy Kafka and his world (A12); prog 15.  
 8.40 Maths Foundation Course Modelling Cranes (M10); prog 24.  
 7.00 Technology Foundation Course Living with Computing (T01); prog 16.  
 7.30 Computing and Computers Coping with Change (M21); prog 15.  
 7.45 Management and the School. Sheffield Hallam School: Facing Change (E24); prog 8.

7.30 Engineering Mechanics Thermofluids and Energy. Gas and Steam Turbines (T24); prog 8.  
 6.40 The Earth: Structure, composition and evolution. Geographical Mapping (E24); prog 17.  
 7.00 Social Science Foundation Course Introduction and Methods (D12); prog 15.  
 7.30 The History of the Sky (A24); prog 29.  
 7.45 History of Architecture and Design 1800-1920. The History of Architecture and Design 1800-1920. Mechanical Services in the Century (A24); prog 10.  
 7.30 Analysis. Laplace Transforms (M32); prog 7.  
 7.45 Feedback on Home Experiments (E24); prog 15.  
 6.40 Oceanography Whales and Whaling (E24); prog 15.  
 7.05 Evolutionary Psychology for the Predator (E24); prog 15.  
 7.30 Biology, brain and behaviour: The Social Primates. Growing Up (S24); prog 15.  
 6.40 Introduction to Pure Mathematics. Convergence (M20); prog 30.  
 7.05 Arts Foundation Course A Golden Age of Work (A18); prog 8.  
 7.30 Technology Foundation Course Simulation Models (M31); prog 8.  
 15.56 Childhood 5-10. Self-help Projects (P21); prog 4.  
 13.20 Contemporary Issues in Education 'What's the Matter (E24); prog 15.  
 7.30 The Enlightenment French 18th Century Art - in Public and Criticism (A24); prog 30

**Sunday September 19**

8.00 History of Architecture and Design 1800-1920. Mechanical Services in the Century (A24); prog 10.  
 8.20 Min's Religious Quest Krishna and Christ (A24); prog 29.  
 7.18 Environment, Lakes and Rivers (E2-3); prog 4.  
 7.40 Urban Change and Conflict. Sars Intervention (D21); prog 8.  
 8.30 Microeconomics. Cost Benefit Analysis (D22); prog 8.  
 8.00 Images and Information. Seeing with Sound (S21); prog 15.  
 8.00 Graphs, Networks and Design. The Location Problem (M20); prog 15.  
 7.00 Environment, Lakes and Rivers (E2-3); prog 4.  
 7.40 The Nature of Chemistry Nitrogen Fixation (E24); prog 29.  
 8.05 Biotechnology and Molecular Biology. Immunology 3: Antibody Genetics and Immunoregulation (S22); prog 15.  
 8.30 Science Foundation Course. Immune Response (S10); prog 9.  
 8.05 Arran (S10); prog 9.  
 8.05 Arts Foundation Course. Modelling Cranes (M10); prog 24.  
 8.05 The Digital Computer. Microcomputers for the Home (E24); prog 15.  
 10.10 Materials Processing. What do you think of it so far? (T22); prog 14.  
 10.30 The Enlightenment. French 18th Century Art - in Public and Criticism (A24); prog 30.  
 11.00 Propagation Biology: Form and Function.  
 11.30 Computers and Computing. Co-operating Computers (M21); prog 15.  
 11.45 Propagation Biology: Whales and Whaling (E24); prog 15.  
 12.15 Propagation Biology: For the Good of the Company (P21); prog 15.  
 12.40 The Earth's Physical Resources. Water Resources - A Case Study (E24); prog 15.  
 12.40 Systems Organization. The Management of Complexity. IATA (3): Clinging a Deal (T24); prog 15.

**Monday September 20**

6.40 The Enlightenment. The Paris Pantheon (A24); prog 15.  
 7.05 Mathematical Models and Methods. Fourier Analysis (M21); prog 15.  
 7.30 The 19th Century Novel and its Legacy Kafka and his world (A12); prog 15.  
 8.40 Maths Foundation Course Modelling Cranes (M10); prog 24.  
 7.00 Technology Foundation Course Living with Computing (T01); prog 16.  
 7.30 Computing and Computers Coping with Change (M21); prog 15.  
 7.45 Management and the School. Sheffield Hallam School: Facing Change (E24); prog 8.  
 6.18 Min's Religious Quest. Inter-religious Dialogue (A24); prog 29.  
 6.38 Fundamentals of Human Geography. Future of Geography (E24); prog 15.  
 6.58 Arts Foundation Course. A Golden Age of Work (A18); prog 8.  
 7.30 Technology Foundation Course Simulation Models (M31); prog 8.  
 15.56 Childhood 5-10. Self-help Projects (P21); prog 4.  
 13.20 Contemporary Issues in Education 'What's the Matter (E24); prog 15.  
 7.30 The Enlightenment French 18th Century Art - in Public and Criticism (A24); prog 30

**Tuesday September 21**

6.40 17th Century England: a changing culture 16th-18th. The Art of Physics (A24); prog 15.  
 7.05 Analytical Psychology. The Self and the Self (E24); prog 15.  
 7.30 Food Production Systems Managing the Desert Margin (T25); prog 8.  
 6.40 Introductory Electronics. General Purpose Integrated Circuits (E24); prog 10.  
 7.05 Science Foundation Course. Quantum Theory: Electrons and Photons (S10); prog 29.  
 7.30 The Handicapped Person in the Community. Working Together (P21); prog 9.  
 11.00 An Aging Society. Voluntary Workers in the Community (E22); prog 8.

**Wednesday September 22**

6.40 Oceanography Whales and Whaling (E24); prog 15.  
 7.05 Evolutionary Psychology for the Predator (E24); prog 15.  
 7.30 Biology, brain and behaviour: The Social Primates. Growing Up (S24); prog 15.  
 6.40 Introduction to Pure Mathematics. Convergence (M20); prog 30.  
 7.05 Arts Foundation Course A Golden Age of Work (A18); prog 8.  
 7.30 Technology Foundation Course Simulation Models (M31); prog 8.  
 15.56 Childhood 5-10. Self-help Projects (P21); prog 4.  
 13.20 Contemporary Issues in Education 'What's the Matter (E24); prog 15.  
 7.30 The Enlightenment French 18th Century Art - in Public and Criticism (A24); prog 30

**Thursday September 23**

6.40 Goggin, Networks and Design. The Location Problem (M20); prog 15.

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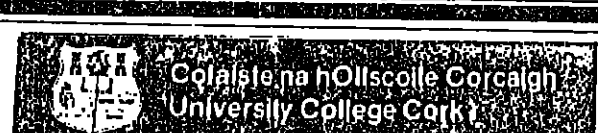
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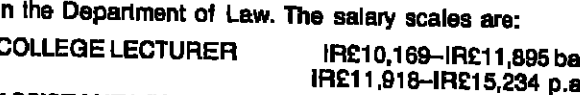
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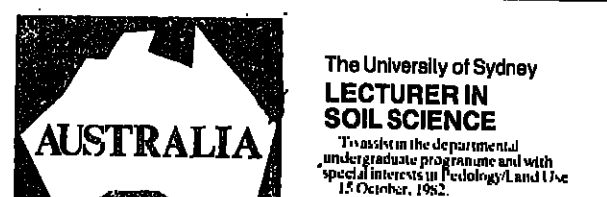
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The University of Sydney

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October, 1982.

The Flinders University of South Australia

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La Trobe University Melbourne

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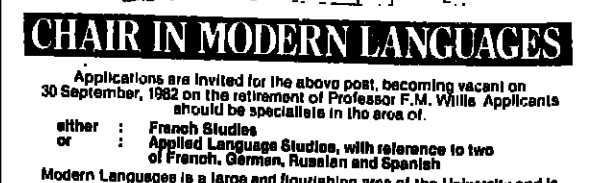
UNIVERSITY OF BRADFORD

### CHAIR IN THE AREA OF MECHANICAL MANUFACTURING ENGINEERING

Applications are invited for this vacant Chair, candidates for which should have an established reputation in one of the following broad fields: Control applied to mechanical equipment or manufacturing processes or systems. Design including CAD. Manufacture including CAM.

The eventual title of the Chair will be determined by the field of interest of the successful candidate. Further particulars may be obtained from The Registrar and Secretary, University of Bradford, Bradford, West Yorkshire, BD7 1DP.

The closing date for receipt of applications is 29 October, 1982.



UNIVERSITY OF BRADFORD

### CHAIR IN MODERN LANGUAGES

Applications are invited for the above post, becoming vacant on 30 September, 1982 on the retirement of Professor F.M. Willis. Applicants should be specialists in the area of either: French Studies or Applied Language Studies, with reference to two of the following: French, German, Russian and Spanish.

Modern Languages is a large and flourishing area of the University and is marked out for continued development. Further particulars, including conditions of service and salary details, may be obtained from The Registrar and Secretary, University of Bradford, West Yorkshire, BD7 1DP. Closing date for receipt of applications is 29 October, 1982.

Applicants from overseas may submit one application by airmail. The College reserves the right to fill the Chair by invitation.

LEEDS THE UNIVERSITY OF SCHOOL OF DENTISTRY DEPARTMENT OF CHILD DENTAL HEALTH

The Council of the University has approved the lifting of a moratorium on the Chair of Child Dentistry. The Council has also approved the Chair of Child Dentistry. The Council has also approved the Chair of Child Dentistry.

Applications are invited from graduates or professional dentists for the post of Research Assistant to the Head of the Department of Child Dentistry. The successful candidate will be required to undertake research in the field of child dentistry.

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### Universities continued

#### THE SOUTH PACIFIC UNIVERSITY OF

Applications are invited from suitably qualified candidates for the post of LECTURER IN PHYSICS (B2/1). The successful candidate will be required to teach and supervise students in the field of Physics. The successful candidate will be required to teach and supervise students in the field of Physics.

#### THE SOUTH PACIFIC UNIVERSITY OF

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#### NEW ZEALAND UNIVERSITY OF AUCKLAND

Applications are invited from suitably qualified candidates for the post of LECTURER IN PHYSICS (B2/1). The successful candidate will be required to teach and supervise students in the field of Physics. The successful candidate will be required to teach and supervise students in the field of Physics.

#### JOHANNESBURG UNIVERSITY OF THE WITWATERSRAND

Applications are invited from suitably qualified candidates for the post of LECTURER IN PHYSICS (B2/1). The successful candidate will be required to teach and supervise students in the field of Physics. The successful candidate will be required to teach and supervise students in the field of Physics.

#### LONDON RESEARCH FELLOW IN INDUSTRIAL RELATIONS

Applications are invited from suitably qualified candidates for the post of RESEARCH FELLOW IN INDUSTRIAL RELATIONS. The successful candidate will be required to conduct research in the field of industrial relations.

#### Adult Education

Applications are invited from suitably qualified candidates for the post of SENIOR TUTOR. The successful candidate will be required to supervise and coordinate adult education programmes.

#### MILTON KEYNES THE OPEN UNIVERSITY

Applications are invited from suitably qualified candidates for the post of LECTURER IN PHYSICS (B2/1). The successful candidate will be required to teach and supervise students in the field of Physics. The successful candidate will be required to teach and supervise students in the field of Physics.

#### GLASGOW UNIVERSITY OF

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#### HONG KONG UNIVERSITY OF

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#### AUSTRALIA MELBOURNE MONASH UNIVERSITY

Applications are invited from suitably qualified candidates for the post of LECTURER IN PHYSICS (B2/1). The successful candidate will be required to teach and supervise students in the field of Physics. The successful candidate will be required to teach and supervise students in the field of Physics.

#### Sydney UNIVERSITY OF TECHNOLOGY

Applications are invited from suitably qualified candidates for the post of LECTURER IN PHYSICS (B2/1). The successful candidate will be required to teach and supervise students in the field of Physics. The successful candidate will be required to teach and supervise students in the field of Physics.

#### READING UNIVERSITY OF

Applications are invited from suitably qualified candidates for the post of LECTURER IN PHYSICS (B2/1). The successful candidate will be required to teach and supervise students in the field of Physics. The successful candidate will be required to teach and supervise students in the field of Physics.

#### DUNDEE COLLEGE OF TECHNOLOGY

Applications are invited from suitably qualified candidates for the post of LECTURER IN PHYSICS (B2/1). The successful candidate will be required to teach and supervise students in the field of Physics. The successful candidate will be required to teach and supervise students in the field of Physics.

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Please quote the classification you require when sending advertisement copy to the Times Higher Education Supplement Classified Advertisement Department.



Polytechnics continued

POLYTECHNIC OF THE SOUTH BANK  
Borough Road, London SE1 0AA

FACULTY OF EDUCATION, HUMAN AND SOCIAL STUDIES  
DEPARTMENT OF HOME ECONOMICS AND CONSUMER STUDIES

HEAD OF DEPARTMENT  
GRADE IV

(Re-advertisement) (Ref: HE11)  
Applications are invited for this post which is to be filled as soon as possible.  
The Department is primarily concerned with a full-time DEE Home Economics for Secondary Teachers and a new BSc Food Textiles and Consumer Studies course which is commencing in September 1982. The person appointed will be expected to develop the Department's contribution in both these areas, and give academic leadership in fostering the development of staff, and both the quality and range of work in the Department.  
Applications are therefore invited within a range of academic expertise but applicants will need to have a proven record in academic leadership, course development and research. While experience of Home Economics in the context of teacher education and of the developing field of Consumer Studies are essential, it is hoped that candidates will offer an opportunity to develop the social and industrial aspects of Consumer Studies within the Department.  
Salary will be in the range: £13,491 - £15,117 p.a. plus £834 p.a. London Allowance.  
Further particulars of the post and application forms are available from the Staffing Office. Tel: 01-928 8888, Ext. 2355.  
Completed application forms to be returned no later than 4th October, 1982.

POLYTECHNIC OF THE SOUTH BANK  
Borough Road, London SE1 0AA

FACULTY OF EDUCATION, HUMAN AND SOCIAL STUDIES  
DEPARTMENT OF PROFESSIONAL EDUCATION STUDIES

HEAD OF DEPARTMENT GRADE IV

(Ref: PES 1)  
Applications are invited for this post which is to be filled as soon as possible.  
The person appointed will be expected to develop the Department's strength in the Primary Education field. This will involve leading and encouraging staff to develop the curriculum offer of the degree in areas such as Multi-ethnic Studies, Community Studies, English as a second language, and Primary School Mathematics. Experience and expertise in one or more of these fields will be an advantage but not essential. Applicants will be expected to have a proven record of academic leadership, course development, and experience of current developments in the field.  
Salary will be in the range: £13,491 - £15,117 p.a. plus £834 p.a. London Allowance.  
Further particulars of the post and application forms are available from the Staffing Office. Tel: 01-928 8888, ext. 2355.  
Completed application forms to be returned to arrive no later than 5th October, 1982.

BRISTOL POLYTECHNIC  
COMPUTER STUDIES & MATHEMATICS DEPARTMENT

LECTURER II/SENIOR LECTURER IN INFORMATION SYSTEMS  
Ref. No. L57

Applications are invited for the post of Lecturer in Analysis, duties to be commencing in January 1983 or as soon as possible thereafter. Applicants should have a demonstrable interest in Information Systems, and a good knowledge of the design and development of information systems in the area of business and industry. The ideal candidate would have a background in both theory and practice in the area of systems analysis, and a good knowledge of the design and development of information systems in the area of business and industry. The ideal candidate would have a background in both theory and practice in the area of systems analysis, and a good knowledge of the design and development of information systems in the area of business and industry.

BRISTOL POLYTECHNIC  
ENGINEERING DEPARTMENT

PRINCIPAL LECTURERS  
(a) DESIGN REF. NO. L52/84  
(b) COMPUTING REF. NO. L52/85  
(c) MECHANICAL REF. NO. L52/86

These are senior posts responsible for the Engineering Department. Applicants should be well qualified, preferably with a good honours degree and relevant industrial or research experience. Duties to commence as soon as possible. Salary: £13,380 (bar) - £14,018 per annum.  
Further details and application forms to be returned to the Staffing Office, Bristol Polytechnic, Colston House, Colston Street, Bristol BS1 3YU.  
THE SOUTH BANK POLYTECHNIC  
Borough Road, London, SE1 0AA  
Educational Technologist (Ref. No. L51)  
Applications are invited for this post which is to be filled as soon as possible. The person appointed will be expected to develop the Department's strength in the Primary Education field. This will involve leading and encouraging staff to develop the curriculum offer of the degree in areas such as Multi-ethnic Studies, Community Studies, English as a second language, and Primary School Mathematics. Experience and expertise in one or more of these fields will be an advantage but not essential. Applicants will be expected to have a proven record of academic leadership, course development, and experience of current developments in the field.  
Salary will be in the range: £13,491 - £15,117 p.a. plus £834 p.a. London Allowance.  
Further particulars of the post and application forms are available from the Staffing Office. Tel: 01-928 8888, ext. 2355.  
Completed application forms to be returned to arrive no later than 5th October, 1982.

DUNDEE COLLEGE OF TECHNOLOGY  
Applications are invited for the following posts in the Department of Mathematics & Computer Studies.

SENIOR LECTURER IN STATISTICS

Applicants should have high academic qualifications together with extensive experience and a proven record in graduate level teaching, research and/or industry or commerce. A specialist interest in forecasting, econometrics, or stochastic modelling will be an advantage. The person appointed will be required to teach to honours degree level and take an active role in the development of statistics within the department.

LECTURER IN MATHEMATICS

Applicants should be well qualified in mathematics and preferably have a record of research in the applications of mathematics. The successful applicant will be required to teach mathematics to honours degree level and will contribute to the department's research effort in applicable or applied mathematics.

LECTURER IN COMPUTING (DATA PROCESSING)

Applicants should be honours graduates with practical experience of data processing in industry, commerce or government service. Teaching experience will be an advantage. The person appointed will be required to teach to degree and diploma level and will have an active interest in one or more of the following areas: business-applications of microcomputers, systems design, data-base organisation.

Salary: Senior Lecturer: £11,000-£12,987 (bar)-£14,748 with initial placing dependent upon previous experience.  
Lecturer: £7,956-£11,700 (bar)-£12,561 with initial placing dependent upon previous experience.  
Financial assistance towards the cost of removal expenses may be payable.

Further particulars and application forms may be obtained from the Personnel Officer, Dundee College of Technology, Ball Street, Dundee DD1 1HG, with whom applications should be lodged not later than 1 October, 1982.

SHEFFIELD CITY POLYTECHNIC  
DEPARTMENT OF COMPUTER STUDIES

LECTURER II/SENIOR LECTURER (3 POSTS)

The persons appointed will teach within their special subject and on the Department's undergraduate and post-graduate courses in Computer Studies. Some general computing teaching to courses in other disciplines will also be required. One of the posts will involve responsibility for data processing teaching to courses in Business Studies.  
Applicants should ideally possess good academic qualifications in computer related fields and be active in research and/or have recent relevant industrial experience. Applicants should state what specialist area of Computer Studies is being offered.  
Salary Scale: Lecturer II - £8,855-£11,022 p.a.  
Senior Lecturer - £10,173-£11,984 (bar) - £12,816 p.a.  
Successful candidates will be appointed to the appropriate salary scale according to their experience and qualifications.

DEPARTMENT OF ECONOMICS AND BUSINESS STUDIES  
LECTURER II IN ECONOMICS

To join an established team of economists. Applicants should be able to contribute to courses in basic economics and to offer or develop a specialist appropriate to the work of the department.  
Salary Scale: £8,855-£11,022 p.a.  
Under current salary regulations and subject to satisfactory performance, the successful candidate can normally expect incremental progression to the Senior Lecturer Scale of which the present maximum is £12,816 p.a.  
Application forms and further details are available from the Personnel Officer, (Dept. T125), Sheffield City Polytechnic, Hallford House, Fitzalan Square, Sheffield, S1 2BA or by phoning 0742 20911, Ext. 387. Completed forms to be returned by 1st October.  
Sheffield City Polytechnic is an Equal Opportunities Employer.

The POLYTECHNIC  
WOLVERHAMPTON

Applications are invited for the post of  
LECTURER II/SENIOR LECTURER  
IN MODERN LANGUAGES

The preferred combination is German and Spanish, but applicants are invited from those able to offer any two languages from German/Spanish/French.  
Duties to commence as soon as possible, and not later than 1st January 1983.  
Application forms and further particulars may be obtained from the Staffing Clerk, The Polytechnic, Wolverhampton, WV1 1SB. Tel: 0902-710864 - Answerphone after office hours - to whom completed forms should be returned within 10 days of the date of this advertisement.

NEWCASTLE UPON TYNE POLYTECHNIC

ACADEMIC ADMINISTRATION DEPARTMENT  
SENIOR ASSISTANT (REGISTRATION AND RECORDS)

Applications are invited from graduates who can fabric and assist in the design, construction and operation of textile machinery. The successful candidate will have a good knowledge of the technical aspects of textile machinery and a good understanding of the design and construction of textile machinery. The successful candidate will have a good knowledge of the technical aspects of textile machinery and a good understanding of the design and construction of textile machinery.

NJC Helyar Unit Conditions  
Applications are invited for the post of Lecturer in Statistics. The successful candidate will be required to teach to honours degree level and take an active role in the development of statistics within the department.

For further details and application forms returnable by 5 October 1982, please contact the Personnel Officer, Newcastle upon Tyne Polytechnic, Eldon Square, Newcastle upon Tyne NE1 7RU.  
Completed application forms to be returned to arrive no later than 5th October, 1982.

Faculty of Engineering  
Department of Electrical, Electronic & Control Engineering.

Reader/Principal Lecturer  
in Microprocessor  
Engineering

£11,931 - £13,290 Bar £15,018 p.a.

Due to major developments in the industrial applications of microprocessor systems this post has been created to provide for the leadership and development of this important area of work.

Applicants are therefore invited from highly qualified candidates who have a proven record of successful industrial collaboration, attraction of external funding, personal research, research supervision and a sound in-depth knowledge of the design of microprocessors or systems for industrial applications.

The successful applicant will be expected to take a major interest in the Department's S.E.R.C./D.A.I. funded Teaching Computer programme.

An application form and further particulars may be obtained from the Personnel Officer, Sunderland Polytechnic, Langham Tower, Ryhope Road, Sunderland S12 7JE, or Tel. Sunderland 76231 ext. 11. Closing date 2nd October, 1982.

SUNDERLAND POLYTECHNIC

NORTH STAFFORDSHIRE POLYTECHNIC  
FACULTY OF COMPUTING, HUMANITIES AND EDUCATION  
DEPARTMENT OF COMPUTING

SENIOR LECTURER II IN COMPUTING

Applications are invited for the post of Senior Lecturer/ Lecturer II in Computing. The successful candidate will be required to teach to honours degree level and take an active role in the development of computing within the department.

Salary Scale: Senior Lecturer - £11,931-£13,290 (bar) - £15,018 p.a.  
Lecturer II - £8,855-£11,022 p.a.

Application forms and further details are available from the Personnel Officer, North Staffordshire Polytechnic, Leazes Road, Newcastle upon Tyne, NE1 7RU. Tel: 0275-221111. Closing date: 1.10.1982.

SUNDERLAND POLYTECHNIC  
Faculty of Engineering  
Department of Civil Engineering  
PRINCIPAL LECTURER IN STRUCTURAL MECHANICS

Salary scale: £11,931 - £13,290 (bar) - £15,018 p.a.  
Details and application forms, which must be returned by 1st October, 1982, obtainable on receipt of SAE from the Director's Secretary, Room 114B, Dorset Institute of Higher Education, Walsdown Road, Poole, Dorset BH12 3BS.

EDGE HILL COLLEGE OF HIGHER EDUCATION

DEPARTMENT OF EDUCATION  
LECTURER II OR SENIOR LECTURER  
IN EDUCATION

Applications are invited from graduate teachers with substantial experience in Primary Schools for this post which is tenable from 1st January, 1983, or as soon as possible thereafter.  
Salary Scales:  
Lecturer II: £8,855 - 10 increments to £11,022  
Senior Lecturer: £10,173 - 8 increments to £12,816  
Further particulars of the post may be obtained from the Personnel Assistant to the Director.  
Completed application forms should be returned to the Director by 5th October, 1982.

SCHOOL OF VISUAL COMMUNICATION DESIGN  
Applications are invited for the post of:  
HEAD OF SCHOOL  
Grade V: £14,679-£16,305

Creative management linked to academic leadership are qualities being sought by a multi-disciplinary team of 2 and 3 dimensional designers. Applicants with a grounding in a design discipline should write to:  
The Personnel Officer  
Hull College of Higher Education  
Inglemere Avenue  
Hull HU6 7LU  
Tel: (0482) 446806  
Closing date for receipt of completed application forms - 30th September 1982.  
Full and fair consideration will be given to disabled applicants.

Hull College of Higher Education

DORSET LEA  
Dorset Institute of Higher Education  
Appointment of Director

Applications are invited from graduates with substantial experience in Higher Education and who hold or have held posts carrying senior management responsibility within a college. Appointment to commence from April 1983. The salary will be at a fixed point within the range for a Group 8 college (£21,872-£22,929).  
Application forms and further particulars may be obtained from the County Education Officer, County Hall, Dorchester, Dorset DT1 1XJ. Telephone enquiries to Mr. J. E. Cooper, Principal Assistant Education Officer at Dorchester 83131 Extension 4381.  
Closing date for receipt of applications will be 24th September, 1982.

Colleges of Higher Education continued

DEPARTMENT OF BUSINESS AND PROFESSIONAL STUDIES  
LII/SL IN BUSINESS FINANCE AND ACCOUNTING

to teach on Degree, Diploma and Professional courses.

LII/SL IN BUSINESS COMMUNICATION

to teach Business Communication and to organise cross modular assignment programmes for BSC Higher Diploma Certificate courses.

LII/SL IN FOOD & BEVERAGE MANAGEMENT

to teach on Higher Diploma and Degree courses

DEPARTMENT OF HUMANITIES  
LII/SL IN MEDIA STUDIES/INFORMATION OFFICER

The completed post for a person with experience in either journalism, broadcasting or public relations including at Honours Degree level and responsibility for the Institute's information and publicity services.

DEPARTMENT OF MANAGEMENT AND TOURISM  
LII/SL IN INDUSTRIAL/EMPLOYEE RELATIONS

to teach on a variety of management, TUC and Higher Diploma courses and to contribute to course development and research.

ST HALINA ROAD, ORMSKIRK, LANCASHIRE L39 4QP  
An Associate College of the University of Lancaster

DEPARTMENT OF EDUCATION  
LECTURER II OR SENIOR LECTURER  
IN EDUCATION

Applications are invited from graduate teachers with substantial experience in Primary Schools for this post which is tenable from 1st January, 1983, or as soon as possible thereafter.  
Salary Scales:  
Lecturer II: £8,855 - 10 increments to £11,022  
Senior Lecturer: £10,173 - 8 increments to £12,816  
Further particulars of the post may be obtained from the Personnel Assistant to the Director.  
Completed application forms should be returned to the Director by 5th October, 1982.

CHELMER INSTITUTE OF HIGHER EDUCATION

Applications are invited for this post which becomes vacant on 1st September 1983 on the retirement of the present Director. The Institute is placed in Group 9 and the salary is currently £23,808 p.a.  
Closing date: 5th October 1982.  
Application forms and details from the County Education Officer (Ref: F), PO Box 47, Chelmsford CM1 1LD.

ESSEX COUNTY COUNCIL

ASSISTANT EDUCATION OFFICER (HIGHER EDUCATION)

This is a new post in the Higher and Further Education branch of the Department designed particularly to assist in meeting the increasing demands in the co-ordination of the provision for the higher and further education generally.

DORSET COUNTY COUNCIL  
DEPARTMENT OF FURTHER EDUCATION

PERSONAL

IMMEDIATE ADVANCES £100 to £20,000. Written terms on request. Street, Poole, Dorset. Tel: 0204 484 484 or 484 5416. 1000

ADMINISTRATION

Applications are invited for a post of Administrative Assistant in the Department of Further Education. The successful candidate will be required to assist in the day to day running of the department and to provide a high standard of administrative support to the staff.

Inner London Education Authority

DIRECTOR OF LEARNING RESOURCES BRANCH

Salary £19,143 to £20,751 (under review)  
PLUS £1,284 pa London Weighting Allowance

This challenging and demanding post arises upon the retirement of Mr. Leslie F. Pyler. The Director is responsible for the management of the Branch which provides information and advice on organising and using a wide range of learning resources in educational establishments. Its work includes the development and production of learning materials and curriculum support, and provides a range of training, central support services and a range of professional activities. The Branch is multi-disciplinary and its staff includes teachers, editors, media specialists, librarians, designers, engineers and other professionals. The ILEA's Education Library and Loan Services are established in the Branch, and the Director will have responsibilities in computing applications of the Inner London Educational Computing Centre.

The selected applicant will have successful and practical senior experience related to the work including teaching experience and will be likely to have had a large group of specialist staff. He/she will need to possess a high level of enthusiasm and commitment for the development of supportive learning resources of an inner city education service, to show flair and creativity and to have had senior management background in a growing and diverse organisation in either the public or private sector.

Application forms for this post (together with a job description) may be obtained from the Educational Officer (Ref: EDU/RES/82) at the County Hall, London SE1 7PB. Completed forms should be returned no later than 4 October 1982. Further information on this post may be obtained by contacting Mrs M. L. Stockley on 01-433 3387.

LEA IS AN EQUAL OPPORTUNITIES EMPLOYER

Lothian Regional Council  
NAPIER COLLEGE OF COMMERCE AND TECHNOLOGY

ASSISTANT PRINCIPAL/DEAN OF FACULTY OF PROFESSIONAL STUDIES

Salary: Grade 17 £18,117  
The Faculty of Professional Studies includes the Departments of Accounting, Banking and Insurance, Business Studies, Industrial and Social Studies, Law, Management and Office Administration, and is concerned with a full range of courses at postgraduate, degree and diploma level.  
The duties of Assistant Principal are College wide and will initially involve responsibilities concerned with curriculum and staff development.  
Applicants must possess appropriate qualifications and experience for this post.  
Application forms and further particulars from: The Administrative Officer (Personnel), Napier College of Commerce and Technology, Colinton Road, Edinburgh EH10 6DT.

Research and Studentships

CULHAM COLLEGE INSTITUTE  
in collaboration with  
THE ANGLICAN COLLEGES OF HIGHER EDUCATION  
wishes to appoint a  
RESEARCH OFFICER

To develop a project enquiring into the future role of the Anglican colleges.  
The person appointed must have a good understanding of British HE, be able to organise collaborative research and have had previous experience of handling both subjective and objective research data.  
The Research Officer will work in close association with staff from the colleges; with the Director of the Institute and also with Mr Brian Kay, Senior Research Fellow on the project and formerly HM Chief Inspector - Teacher Training.  
The appointment is likely to be made within the top half of Scale 1A (£6,070-£10,575) although a very experienced candidate could be placed on Scale 2 (£10,160-£15,735). Both scales under consideration are subject to a review in 1983. The post is for 2 years. Closing date for applications Monday 4th October.  
Further particulars and application forms from:  
The Revd. Dr. John Gay  
Culham College Institute, HE  
60 East Saint Helen Street,  
Abingdon, Oxon, OX14 5EB.

OXFORD HENLEY COLLEGE  
RESEARCH ASSISTANT - TECHNOLOGY FOR MANAGEMENT

The successful candidate will be required to assist in research concerned with the use of information technology in business to help develop new products and services. The successful candidate will be required to assist in research concerned with the use of information technology in business to help develop new products and services. The successful candidate will be required to assist in research concerned with the use of information technology in business to help develop new products and services.

NEWCASTLE UPON TYNE UNIVERSITY OF MARINE TECHNOLOGY

Applications are invited from qualified graduates for a research post in the Department of Marine Technology. The successful candidate will be required to assist in research concerned with the use of information technology in business to help develop new products and services.

BRADFORD UNIVERSITY OF

Applications are invited for a post of Administrative Assistant in the Department of Further Education. The successful candidate will be required to assist in the day to day running of the department and to provide a high standard of administrative support to the staff.

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

RESEARCH ASSISTANT/ DEMONSTRATOR

Good honours graduates desirous of working for a higher degree are invited to apply for a research post in the following areas:  
High Sensitivity Electronic Instrumentation Systems (Ref E99)  
Salary: £5,355-£5,580-£5,808-£6,036  
Further details and form of application from The Staff Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU. Applications to be returned as soon as possible.

TRENT POLYTECHNIC NOTTINGHAM

university college of swansea

Digital Audio Research

Applications are invited for two vacancies of RESEARCH ASSISTANT in the Department of Electrical and Electronic Engineering. Candidates should have either a first or upper second class honours degree in electrical and electronic engineering and/or industrial experience. The work will be in the area of analogue-to-digital and digital-to-analogue conversion of high speed sound programmes. New signal processing and measurement techniques are required for the production of a very high accuracy monophonic conversion will be investigated. Suitable candidates may be seen to the Director of the Department of Electrical and Electronic Engineering, University College of Swansea, Singleton Park, Swansea, to which they should be sent by 1st October 1982.

NORTH EAST LONDON POLYTECHNIC

DEPARTMENT OF GENERAL ENGINEERING AND CONSTRUCTION

A graduate in planning, land administration, computer studies, or a related discipline is required to work under the supervision of the Senior Lecturer in the area of planning. The successful candidate will be required to assist in research concerned with the use of information technology in business to help develop new products and services.

JOHANNESBURG UNIVERSITY OF THE WITWATERSRAND

Applications are invited from suitably qualified persons in the following areas: African Studies, Anthropology, Industrial Sociology, Economics, Political Science. Three vacancies are available. Further particulars and application forms from: The Director of Personnel, Johannesburg, to whom they should be sent by 1st October 1982.

NEWCASTLE UPON TYNE UNIVERSITY OF MARINE TECHNOLOGY

Applications are invited from qualified graduates for a research post in the Department of Marine Technology. The successful candidate will be required to assist in research concerned with the use of information technology in business to help develop new products and services.

BRADFORD UNIVERSITY OF

Applications are invited for a post of Administrative Assistant in the Department of Further Education. The successful candidate will be required to assist in the day to day running of the department and to provide a high standard of administrative support to the staff.



Colleges of Further Education

THURROCK TECHNICAL COLLEGE Woodview, Grays HEAD OF DEPARTMENT OF TECHNOLOGY (GRADE V) Returned from 1st January, 1983. The Department provides a wide range of traditional full and part-time courses in Mechanical and Electrical Engineering at Technician and Craft level, to serve industry and young people in the area.

Research and continued

LIVERPOOL CITY OF EDUCATION DEPARTMENT ADVISER FOR FURTHER EDUCATION FULL-TIME HEAD TEACHERS CROFTS - 015-246 210-243

ABERDEEN UNIVERSITY OF DEPARTMENT OF ENGINEERING RESEARCH ASSISTANT Applications are invited from graduates in Electrical Engineering, Electronics, Physics or Chemistry for the post of Research Assistant on the I.A.A.R. scale to work with a group of staff on the design and development of a new type of transducer.

Adult Vacancies continued

NORTHERN COLLEGE (Wentworth Castle, Nr. Barnsley) PRINCIPAL Applications are invited for the post of Principal of the Northern College, on the retirement of the first Principal, Michael Barratt Brown, on 30th August, 1983.

Overseas

THE LADY DAVIS FELLOWSHIP TRUST P.O. Box 1255 Jerusalem 91904, Israel FELLOWSHIPS FOR STUDY, RESEARCH OR TEACHING AT GRADUATE, POST-DOCTORAL OR PROFESSORIAL LEVELS In 1983-84 at the Hebrew University of Jerusalem or the Technion - Israel Institute of Technology, Haifa

THE HEBREW UNIVERSITY OF JERUSALEM Jerusalem, Israel The Hebrew University of Jerusalem offers a small number of POST-DOCTORAL FELLOWSHIPS for the 1983-84 academic year in the Humanities, Social Sciences, Natural Sciences, Agriculture and Medicine.

Twente University of Technology A vacancy exists in the DEPARTMENTS OF ELECTRICAL ENGINEERING AND APPLIED PHYSICS of Twente University of Technology for a full professorship in the Materials Science of Transducers Group which is part of both above mentioned Departments.

JOHANNESBURG UNIVERSITY OF THE WITWATERSRAND DEPARTMENT OF SURVEYING ADDITIONAL CHAIR IN SURVEYING (R20 255 p.a.) Applications are invited from suitably qualified persons, regardless of sex, race, colour, religion or national origin for the above appointment to the above post.

UNIVERSITY OF NATAL DEPARTMENT OF PSYCHOLOGY DURBAN, SOUTH AFRICA Applications are invited from suitably qualified persons, regardless of sex, religion, race, colour or national origin for appointment to the post of SENIOR LECTURER Applicants should have a higher degree in psychology, and substantial research and teaching experience.

SOUTH AFRICA RHODES UNIVERSITY COLLEGE, DURBAN Applications are invited for the following posts from suitably qualified persons: SENIOR LECTURER IN PSYCHOLOGY SENIOR LECTURER IN PHYSICAL EDUCATION SENIOR LECTURER IN LINGUISTICS AND APPLIED LANGUAGE COMMUNICATIONS

ISRAEL COMPTON SCIENCE VACANCY Birkbeck University, an independent Israeli institution in the field of applied science, is seeking a Senior Lecturer in the post of Physical Education. The successful candidate should have a higher degree in Physical Education and have the administrative and research experience of a senior lecturer.

Overseas continued

Australian Institute of Multicultural Affairs The Institute has Commonwealth statutory authority responsible for developing in the Australian community an awareness of its diverse cultures, an appreciation of the contributions of these cultures to society, and promoting tolerance, understanding and cohesion throughout the Australian society.

UNIVERSITY OF CAPE TOWN Sonnenberg Senior Research Officer in Marine Geoscience Applications are invited for the newly created post of Sonnenberg Senior Research Officer in Marine Geoscience. The successful candidate will have a Ph.D. in some branch of Marine Geoscience, preferably in sedimentology, sedimentary geochemistry, geophysics or micropaleontology and have the ability to initiate research programmes that involve active sea time and the supervision of postgraduate studies.

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DATHI UNIVERSITY OF TECHNICAL PROCESSES Applications are invited from graduates with library studies from the University of Bath, Bath, BA2 7AY, quoting reference 82/10.

REMINDER COPY FOR CLASSIFIED ADVERTISEMENTS IN THE T.H.E.S. SHOULD ARRIVE NOT LATER THAN 10.00 AM MONDAY PRECEDING THE PUBLICATION

Classified Advertisements To advertise in the THES Please phone JANE McFARLANE on 01-253 3000 Extn 232 THE TIMES HIGHER EDUCATION SUPPLEMENT PRIORY HOUSE ST JOHNS LANE LONDON EC1M 4BX



# Don's diary

## Sunday

After breakfast, start the concluding sections of a paper on possible effects of oil pollution on marine ecosystems in Papua New Guinea, to be given at a conference (in Port Moresby) later in the week. I and several colleagues are annoyed at the short notice, seven days, given by the organizers of the conference, for the meeting was planned several months ago.

Go to the swimming club for lunch and relaxation. Unfortunately the weather lets us down for once and just as lunch arrives so does a torrential downpour. Eat fish and chips huddled under a dripping sunshade.

Go home and finish the pollution paper, ready for the typist. Help the children with their homework. As they get older, we find our evenings being devoted more and more to them with less time for other activities. Time in the BBC World Service for the latest news. So far from home, all news is good news.

## Monday

Students return after mid semester break. Give lecture about mangrove forests of Papua New Guinea, some of the finest remaining anywhere in the world. Typist works rapidly and in the afternoon check the pollution paper for errors. Go to the airport and check on the progress of our claim for compensation for baggage lost en route to Port Moresby. Little progress, probably months before we get anything. Finish the afternoon in the library, reading *Nature* and browsing through the current periodicals.

Trying to house-train our new cat and decide to leave it out overnight.

## Tuesday

Woken at 2am by cat having a fight with vicious stray dog. Go outside but cannot find it. In the morning surprised to find the cat alive (though badly shaken) and decide to return it to the RSPCA. It is too dangerous for cats here if the garden is unfenced.

Collect pollution paper from the printer and find that the pages of all 40 copies are stapled in the wrong order. Decide not to say anything and rearrange them myself.

Spend the rest of the morning sorting and examining some molluscs collected for me by colleagues just returned from a field trip to a remote part of the country. Travel is difficult and expensive here, so one takes all possible opportunities for collecting material. In the afternoon take the students to the oil pollution conference. Interesting talks and films on methods of cleaning up an oil spill, followed by a practical demonstration in a small pond.

## Wednesday

Eight o'clock lecture. Best time of the day for lecturing. Still cool enough not to sweat with the effort and the day not broken up. After the lecture go down to Port Moresby and attend the remainder of the morning session of the conference. Present my paper, which seems to go down all right. One belligerent question from a UK visitor who quotes from a recent (relevant) study and have I seen it. Have to confess that I haven't.

Afterwards a sea captain from Dundee introduces himself, having recognized my east of Scotland accent. He works for the large copper-mine on Bougainville Island and says he'll recommend to his company that I do a short consultancy for them - nothing guaranteed of course. Once again, glad for the student years in Aberdeen that have masked my English accent. Being taken for a Scot is, I am convinced, of more benefit than being taken as English.

## Thursday

On the way home from work meet a colleague from the law department. Comment that I am surprised to see him as in a radio broadcast last Sunday he openly questioned the integrity of a government minister. In many countries that would mean a one-way plane ticket out.

As usual, cycle to work and admire the view across the rolling savanna land to the distant peaks of the Owen Stanley ranges. The imagined coolness of the peaks is a great psychological booster against the heat of the coast. Spend most of the day talking with colleagues and asking them for their help in teaching the environmental sciences courses. The course is multi-disciplinary and therefore requires input from a variety of specialists. Thankfully, all seem willing to participate. If not, the course would be in danger of folding.

Visit the university doctor and get treatment for enteric amoebae, an occupational hazard of life in the tropics. Finish the afternoon in the library. In *THE THES* follow the latest redundancy rows in UK universities. Reflect that morale there must be low and am not unthankful that I am out of it. Will it get to the point where people are actually fired, and if so, how will it be decided who is to go. Last in, first out - an "objective" assessment of someone's value? Or worst of all, sack a fellow because you don't like him?

In the evening attend an environmental seminar on transport and economic development. One of the points made by the speaker is that it is inevitable that in Papua New Guinea, with limited finance and a small population scattered widely over rough terrain, some areas will never get roads.

## Friday

Listen to pre-breakfast party political broadcast in connexion with the forthcoming general elections. Speaker promises roads for all if his party forms the next government. Take Melanie to see the doctor after an ear infection developed overnight. The fees and medicines for this and yesterday's visit come to over £25. Pays to be healthy here.

Take the students to the summing-up session of the oil pollution conference. No doubt that there are now sophisticated techniques for dealing with oil spills, and the equipment readily available at a price. This price is probably too high for the government; they would be better to compel the trading and development companies to provide the apparatus and manpower themselves.

Go home and drink some beer. The two breweries in Papua New Guinea are currently engaged in a price war. This has reduced beer prices by 30 per cent in the last year.

## Saturday

Do some housework. One of my tasks is to maintain the 455 louver windows with which we are blessed. This task is like the job of painting the Forth railway bridge, in that when you're finished at one end it's time to start at the beginning again.

Finish the week with dinner at a friend's house. There is no television in the country (but plans for it are afoot) and little organized entertainment. Entertaining or visiting friends is therefore a major recreation.

M. R. Chambers

The author is senior lecturer in environmental sciences at the University of Papua New Guinea.

# Playing the parts of academics

Like many others, no doubt, I have been thinking about the writing of history by actors. Recently television has twice entertained us with well-known actors giving versions of history and presumably (because they are actors) making it more lively than an academic historian would do by bringing the episode to life. I would not be writing this if I did not think there was something wrong and unconvincing about it.

We have heard about clowns trying to play Hamlet but we now see actors trying to play academics. Who would have thought we were so excited that actors would want to be like us? It was probably because a lot of them started their acting careers at a university where there is leisure to net and it is the best way to become known. It is certainly the best way to become a comic.

To return to the actors. Some reputable academics are consummate actors, notably Bryan and Taylor. Tired of acting in the lecture room they take to television if they are prepared to risk their academic reputation. To some it comes naturally. Laurie Taylor says that he was an actor before he thought of becoming an academic.



Patrick Nuttgens

I have occasionally watched an actor throwing no light on my own subject, like Donald Sinden burrowing in parish churches. But that is not what I have in mind. The actor-academics whom I have just watched are Robert Hardy and Kenneth Griffith. Hardy is a stunningly good actor, famous for his stage performances for everything else, especially as the elder vet, sometimes overacting so grossly that you can hardly wait for him to come on again and wreck the story more. What he was showing us was the truth about General Gordon, who must have been weird and therefore the very stuff for the actor-academic.

It was a superb performance. The timing was brilliant; Hardy only had to turn round in the middle of a sentence and the scene if not the country had changed. He also had different clothes for every scene and every thought; there is probably going to be an exhibition of his clothes one of these days. The only problem was, that nothing happened. I have for a long time wanted to know why Gordon was in Khartoum and I did not find out. Hardy had thought out everything except the plot.

I was different with Griffith, who is an old hand at this kind of show. Sartorially he is nothing like so smart as Hardy and seems to have only one suit, that doesn't fit properly. In silhouette, which he rather likes, he is like a rather thin, slightly hunched man. He has a long, thin nose and a small, pointed chin. He is a very good actor, but he is not what I have in mind. The actor-academics whom I have just watched are Robert Hardy and Kenneth Griffith. Hardy is a stunningly good actor, famous for his stage performances for everything else, especially as the elder vet, sometimes overacting so grossly that you can hardly wait for him to come on again and wreck the story more. What he was showing us was the truth about General Gordon, who must have been weird and therefore the very stuff for the actor-academic.

## General secretary

Sir, - I wonder if I am over sensitive about such matters but I do consider your reporting of the Association of University Teachers' search for a new general secretary as verging on the prurient and certainly as an intrusion on a matter which I see as being between the applicants and the selection committee.

Firstly you publish the names of those who have failed to make the final shortlist thus slighting them in the eyes of their colleagues and making public something which they may well have wished to keep quiet. Then, having elevated four in the same public eye for final consideration, you announce the unlikelihood of a decision being reached when they are eventually interviewed, thus managing to slight them also.

You also announce that the committee might return to its first shortlist. If that happens and if one of those is finally appointed, it will be apparent to the entire membership and to your entire readership that he or she was clearly not the first choice. In so doing you have managed to turn a perfectly proper procedure into a thoroughly unedifying spectacle.

Yours faithfully,  
STEPHEN WESTCOTT  
1 Walton Station Lane,  
Sanday, Wakefield,  
West Yorkshire.

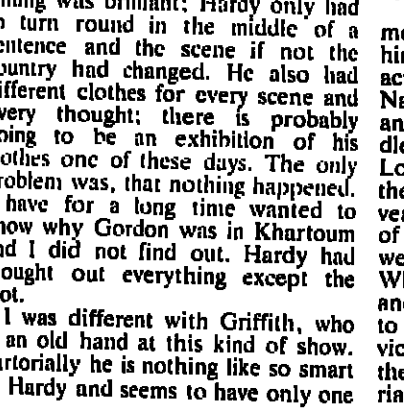
## Just too canny a number?

Yet it also raises the question of whether the universities should look for a *quid pro quo* to offer the Government in return for maintaining a higher level of resources. Perhaps we need a "better value for money" campaign rather than an "anti-cuts" campaign. Greater flexibility might have a considerable appeal to government. Whatever Neil Kinnock might do, the good old days are not going to return.

With the onset of the Open Tech, and a greater interest in distance and part-time learning, are we prepared to put our investment in higher education to new and more efficient use? Whatever the deal might be, something needs to be done to re-establish more dynamic to the system. The steady erosion of resources and student numbers produces a catastrophic lack of movement for academic staff. In department after department the middle aged, if not the over-sixties, heavily predominate.

Really talented research students cannot be recruited. Departments will grow old together, will get progressively more sluggish without an influx of newer, sharper people and will eventually face large-scale replacement with young, untainted staff, which, like the Robbins bulge, will strain quality.

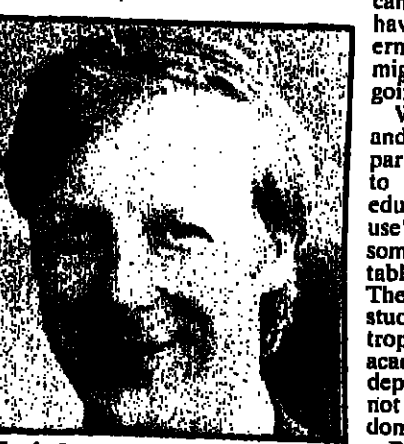
I can sympathize with the bright temporary member of staff, in a department for a year, who looks around and asks what research has X 60 and no longer bothering to put rent redundancy terms are not weed-system. It is just too canny a number being in a university, even today. Is



Keith Hampson

A brief encounter with a university telephone and the absence yet again of the lecturer I wanted has led me to recall those long hot summers one enjoyed in academic life. Not that it was all play by any means. But there was a certain relaxed air about life which I seldom find these days. Do the universities really need such a long summer break?

I raise this in part because the long vacation is one of those hangovers from a lost era. The basic need for it has long been forgotten but there are always plenty of contemporary justifications for keeping it.



Keith Hampson

the answer a compulsory early retirement scheme? Educational institutions are not susceptible to swift change. By highlighting the UGC, the present Government has hastened change to a painful extent. But there is one further, logical and yet more radical step it should take.

Until the recent selective cutting exercise by the UGC, little was known about the UGC's sub-committees. But these subject specialist committees now carry powers of life and death. The judgments they made have led many people to demand a reform of the system. But let us pause a moment. Before the new structure for Advanced Further Education fully duplicates the UGC's committee set-up, why not establish a single, cross-binary system of subject committees? It might even be possible to subsume the CNAA into such a structure. At a stroke, not only would it check the growth of the educational bureaucracy, it might even abolish some of it. Initially these subject panels would advise the respective university and public sector bodies, which would in turn advise the government, the institutions, the local authorities. Why do we always make life so complicated and costly?

The logic therefore would be the eventual merger of university and public sector bodies into one higher education commission, which is of course what every House of Commons inquiry into this question has always proposed. But why wait? Perhaps in the quango hunting days, Mrs Thatcher might be more willing to consider this than she was when she was at DES.

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It is significant that the second of these motions was the general secretary of the Iron and Steel Trades Confederation (whose members are suffering extensively from unemployment) and many other speakers to the motion came from a cross section of the trade union movement. The same was true in the debate on unemployment and training in which the role of the new Youth Training Scheme was highlighted.

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## Letters to the Editor

### The culture of research

Sir, - Your leader (September 10) quite accurately expresses the view that a lack of national culture is likely to strangle the exploitation of scientific research. Unfortunately, the gap between seeing research as a panacea for all (or "fire fighting" as it is known in the trade) and treating it as irrelevant to economic needs, is only a minor symptom of a major disease that could turn out to be fatal. There are three corners to my argument.

The first is the effect of the NIH (not invented here) syndrome. Although there are many firms in this country, many (particularly among the larger ones) see the science done as a potential competitor. Often, successful university research is seen merely as an indicator for the large firm to devote its own effort to rediscovery. Sometimes, if the firm has a large investment in a research area where the university is producing results, these are ignored to justify the investment. One cannot point at the industrial organization alone; the spirit of NIH may equally be found among universities and government

### Films for promotion

Sir, - Your correspondents who wrote to comment on, and to jeer at, my failure to mention more than three of the films "advertising" universities, wrote in ignorance of their duties. The three mentioned in my article are the only three since 1948 to be notified to the quarterly British National Film Catalogue.

If there are more than 30 more in existence then their makers or sponsors are neglecting the first duty of any university department which is to publish its inventions nationally. I met these three films through the National Film Catalogue and was able to recommend that the National Film Archive took steps to procure them. They are not only interesting as films, they are important historical records. I hope Mr Yates of the University of Manchester Institute of Science and Technology and the makers of the 36 others known to him will come out of their amused state of cosy *colerie* superiority and do their duty to fellow film makers, film students and historians.

The further point that worries me is this. Is the making of advertising films a legitimate use either for the public funds on which most universities subsist or of the limited audio-visual resources and expertise available to universities? Escalation in advertising, as in arms races, usually escalates well beyond the justifiable out of fear and imitation. Does it not give the possibly quite unjust impression that university audio-visual centres are directed by people who find it easier to think in advertising media rather than pedagogical terms? Can any audio-visual centre show that the cost of the films has been justified in student response?

Given the current University Grants Committee limits and penalties on student numbers and the design of the standard Universities Central Council admissions form, such demonstration would have to be in terms of quality rather than quantity. I believe university audio-visual expertise should be put to better use than aping the sales techniques of detergent manufacturers.

Yours sincerely,  
D. C. WATT  
Stevenson professor of international history, University of London.

### Monopoly

Sir, - The present agreements (*THES*, August 6 1982) whereby the Medical Research Council grants first option in the rights of commercial exploitation of patents produced by MRC staff to the British biotechnology company Celltech (a "monopoly position"), and the British Technology Group retains a monopoly right to the first refusal of patent rights arising out of work supported by the research councils, seem clear cases for referral to the Director General of Fair Trading under his powers under the Competition practices", which courses of conduct tend to restrict, distort or prevent competition.

In particular, what are the royalties awarded to MRC (and other research council) inventors in their products, and would they and the MRC (and other research councils) fare better with other companies in a competitive basis both in financial and other terms? What patent rights do universities (and their staff) retain when undertaking research work partly or wholly supported on research council grants?

STANLEY ALDERSON  
7 Highfield Avenue,  
Cambridge CB4 2AJ.

### Union View

representing organized working class interests and the educational unions and educational interests. This is an important step forward and one which must be extended if campaigns to restore education cuts and renew educational priorities is to be maintained.

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## Policies for hiring

Sir, - What's wrong with the hiring policies of our universities and research institutes? Beside having to put up with a high rate of refusals, contemporary qualified candidates also must contend with the whims and inefficiency of selection committees burdened by the deadwood accumulated in more prosperous times. As a recent PhD who managed to publish over a dozen articles and a monograph in less than four years to conform to the lofty standards offered to me, I have recently had my quota of hiring policies - from the stupid through the hypocritical to the negligent. To wit:

a) The stupid one. A well-known American university advertised four positions, then recanted on the grounds that the applicants' qualifications were "so extraordinarily high that we could have created a whole new department of national standing". This is probably why they cancelled everything and re-advertised for one position only.

b) The hypocritical one. Like everybody else (in North America at least), I have had my share of universities advertising internationally -

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## Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

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Sir, - Your leader (September 10) quite accurately expresses the view that a lack of national culture is likely to strangle the exploitation of scientific research. Unfortunately, the gap between seeing research as a panacea for all (or "fire fighting" as it is known in the trade) and treating it as irrelevant to economic needs, is only a minor symptom of a major disease that could turn out to be fatal. There are three corners to my argument.

The first is the effect of the NIH (not invented here) syndrome. Although there are many firms in this country, many (particularly among the larger ones) see the science done as a potential competitor. Often, successful university research is seen merely as an indicator for the large firm to devote its own effort to rediscovery. Sometimes, if the firm has a large investment in a research area where the university is producing results, these are ignored to justify the investment. One cannot point at the industrial organization alone; the spirit of NIH may equally be found among universities and government

## Policies for hiring

Sir, - What's wrong with the hiring policies of our universities and research institutes? Beside having to put up with a high rate of refusals, contemporary qualified candidates also must contend with the whims and inefficiency of selection committees burdened by the deadwood accumulated in more prosperous times. As a recent PhD who managed to publish over a dozen articles and a monograph in less than four years to conform to the lofty standards offered to me, I have recently had my quota of hiring policies - from the stupid through the hypocritical to the negligent. To wit:

a) The stupid one. A well-known American university advertised four positions, then recanted on the grounds that the applicants' qualifications were "so extraordinarily high that we could have created a whole new department of national standing". This is probably why they cancelled everything and re-advertised for one position only.

b) The hypocritical one. Like everybody else (in North America at least), I have had my share of universities advertising internationally -

## Women's status

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Should politics, nationalism play a role in the status of minority groups there is bound to be fanaticism as well should the results not come about. Tempers rise and reason may fall short. That was perhaps the break down of the conference in Montreal right in a summer low of public interest.

Certainly there is a need for issues such as rape and single mothers aid for day care centres. In this day and age of closing institutions such as hospitals as well as schools, thousands of teachers and nurses will be out of a job - most of them women. The natural place of women as educators may be threatened as more and more in the community realize that educa-

## Expensive disharmony

Sir, - In your report "NUS row over chief executive's perks" (*THES* September 10, 1982) it is suggested that NUS's internal problems are the result of "a more cost effective, professional management structure". We are writing as representatives of the staff in NUS to make it clear that we have never opposed competent or professional management; indeed, we would welcome such a move.

The NUS president, Mr Neil Stewart, is quoted as saying that there is no dispute with the trade union group. He must surely be aware, however, that the past year has seen

## Coventry (Lanchester)

Sir, - I am writing in response to your note about the ex-students association at Coventry (Lanchester) Polytechnic (*THES* August 27).

I should like to correct the title of the association and therefore the Coventry (Lanchester) Polytechnic Association. Secondly your tenth anniversary was two years ago which was when the idea of an ex-students association was mooted. What has happened this year is that a steering committee has been replaced by the first "real" committee with Mr David Lishman as chairman.

## Public sector unity: the real issue

In the week before the beginning of many college terms the trade union movement assembled in Brighton. Natfhe's delegation and officials returned exhausted from a week of debate and discussion.

Natfhe had several motions and amendments on the agenda. A motion of continuing education and unemployment calling attention to the third objective of the New Training Initiative and the need for educational opportunities to be opened up to adults and particularly those who are unemployed, many of them on a more or less permanent basis.

It is significant that the second of these motions was the general secretary of the Iron and Steel Trades Confederation (whose members are suffering extensively from unemployment) and many other speakers to the motion came from a cross section of the trade union movement. The same was true in the debate on unemployment and training in which the role of the new Youth Training Scheme was highlighted.

Natfhe's amendment to the major composite motion drew attention to the need to involve educational interests at all levels. Happily the reminder was more of a perfunctory nature because several unions had already recognized in their contributions the important role which education and educational interests have to play.

These debates underlined the links that are now being made, in very concrete forms, between major sections of the trade union movement

## Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

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## Public sector unity: the real issue

representing organized working class interests and the educational unions and educational interests. This is an important step forward and one which must be extended if campaigns to restore education cuts and renew educational priorities is to be maintained.

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